

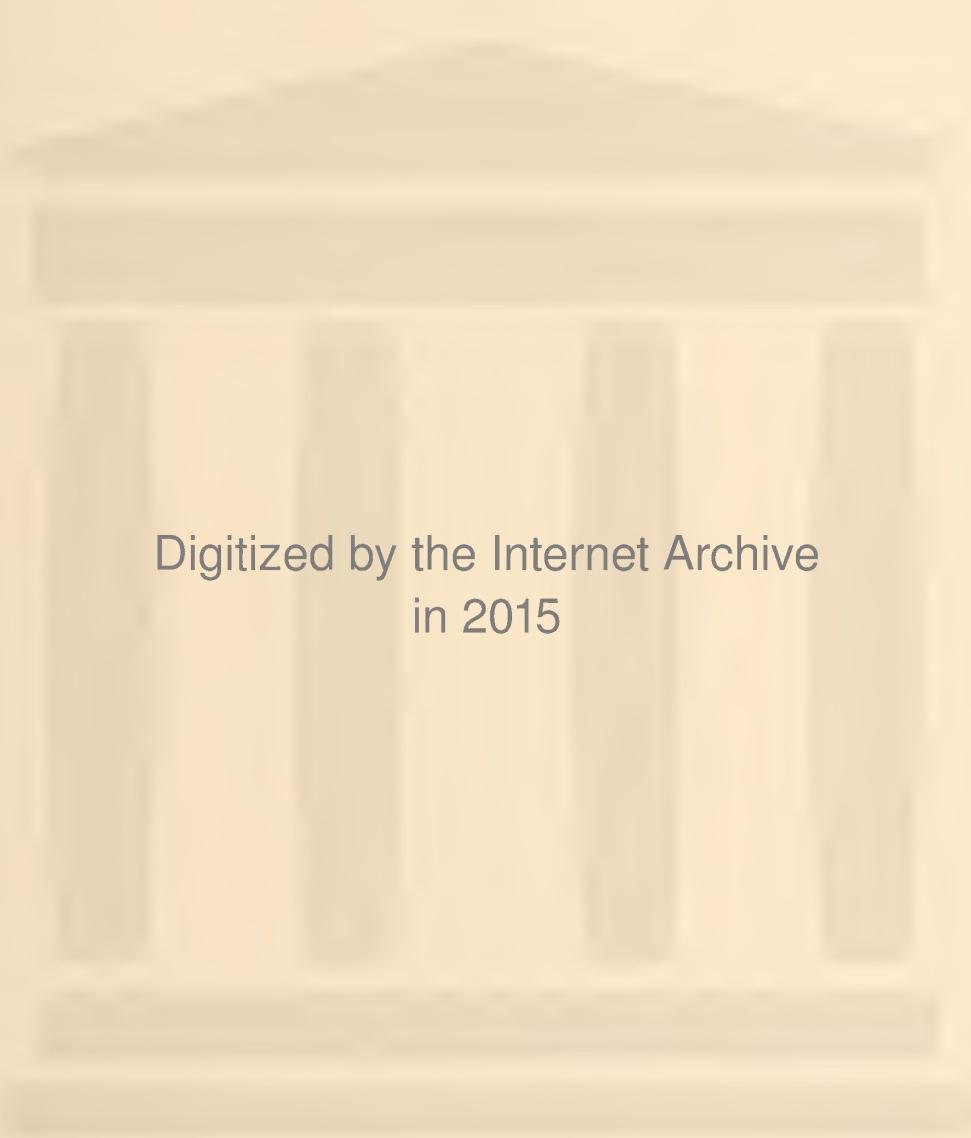
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1988

THE JOURNAL

OF THE

Indiana State Medical Association

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF INDIANA

Issued Monthly

Under the Direction of the Council

ALBERT E. BULSON, JR., B.S., M.D., F.A.C.S.

Editor and Manager

406 West Berry Street

OFFICE OF PUBLICATION

THE N. Y. ACADEMY

OF MEDICINE

Baltimore, Indiana

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INDEX TO VOL. XV.

January to December, Inclusive, 1922

THE JOURNAL OF THE Indiana State Medical Association

*Owned, Published and Controlled by the Indiana State Medical Association
ISSUED MONTHLY under the Direction of the Council*

Volume XV
Number 1

FORT WAYNE, IND., JANUARY 15, 1922

Per Year, \$3.00
Single Copy, 30 Cents

CONTENTS

ORIGINAL ARTICLES

PAGE

Bacteria Recovered Postmortem With Special Reference to Selective Localization and Focal Infection. Preliminary Report. Arlie R. Barnes, Fellow in Medicine, The Mayo Foundation, Rochester, Minnesota, and Alfred S. Giordano, Fellow in Pathology, The Mayo Foundation, First Assistant in Section on Pathologic Anatomy, The Mayo Clinic, Rochester, Minnesota. Trachoma or Folliculosis Among School Children. J. A. Stucky, Lexington, Kentucky.	1
A Case of Eclampsia With 42 Convulsions. Treated by Caesarian Section, Phlebotomy and Blood Transfusion: Survival of Both Mother and Child. W. D. Gatch and W. D. Little, Indianapolis. (From the Department of Surgery, Indiana University School of Medicine).	7
The Physician: Some Newer Tendencies in Preventive Medicine. Frank B. Wynn, Indianapolis	13
	15

EDITORIALS

PAGE

Socialized Medicine.	18
Unethical Medical Advertising.	18
Promiscuous Adoption of Medical Innovations.	19
Editorial Notes.	20

DEATHS

R. B. Petro, Franklin; Harry S. Toner (formerly Shellbyville), Austin, Texas; David H. Harold, Westfield; J. W. Arnold, Columbus; William C. Prough, Goodland; Charles A. McClure, Eminence; Charles W. Gordon, Fort Wayne; Samuel R. White, Laud; Greenly V. Woollen, Indianapolis; Albert Carl Kimberlin, Indianapolis	26
--	----

(Continued on Advertising Page VIII)

Next Annual Session, Muncie, September 27, 28, 29, 1922. List of Officers and Committees on Adv. Page 2. Entered as Second Class Matter, January 20, 1908, at the Postoffice at Fort Wayne, Indiana, under Act of Congress of March 3, 1879. Accepted for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized October 18, 1918.

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VOLUME XV

JANUARY 15, 1922

NUMBER 1

ORIGINAL ARTICLES

BACTERIA RECOVERED POSTMORTEM WITH SPECIAL REFERENCE TO SELECTIVE LOCALIZATION AND FOCAL INFECTION

PRELIMINARY REPORT*

ARLIE R. BARNES, M.D.
FELLOW IN MEDICINE,
THE MAYO FOUNDATION

and

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FELLOW IN PATHOLOGY, THE MAYO FOUNDATION,
FIRST ASSISTANT IN SECTION ON PATHOLOGIC
ANATOMY, THE MAYO CLINIC,
ROCHESTER, MINNESOTA

Hippocrates mentioned that abscess of the ear and necrosis of the jaw may be due to infected teeth. More than one hundred years ago Benjamin Rush advanced the opinion that decayed teeth "were the unsuspected cause of general diseases", and reported a case of rheumatism of the hip-joint cured by the extraction of a decayed tooth. The importance of the relation of foci of infection to general diseases is conveyed by the fact that Evans cites thirty-eight acute and eleven chronic diseases which today are considered focal in origin.

Meisser and Rosenow, working in the Mayo Foundation, have reproduced perfectly in dogs the conditions of focal infection as they probably occur in man. They removed in a sterile manner the pulps from two teeth of each of four dogs and infected the pulp chambers with bacteria from the tonsils of a patient with focal nephritis. The pulp chambers were then sealed with amalgam and the animals allowed to live three months. These organisms localized in the kidneys of each of the four dogs, producing focal and diffuse lesions, the varying ages of which indicated that the kidneys had sustained a series of successive or continuous invasions by bacteria.

Experimental evidence to explain the probable *modus operandi* of focal infection has been

accumulating. Forssner, using streptococci that did not show specific pathogenicity for the kidney, cultured them in kidney tissue and kidney extract, after which they developed special affinity for kidney tissue when injected intravenously into animals. Rosenow, while studying the transmutations within the streptococcus-pneumococcus groups, noted that as avirulent strains were passed through animals they acquired increasing virulence and exhibited a selective affinity for certain tissues. Thus it occurred to him that a similar mechanism might obtain in diseases focal in origin. For example, only a streptococcus low in the scale of virulence was found capable of producing chronic infectious endocarditis, while this same organism with its virulence increased by repeated subculture was capable of producing malignant endocarditis!

What determines the specific invasive powers of an organism is not clear. Evans points out that the *Treponema pallidum* may invade the uninjured mucous membrane of the lip and that the gonococcus may invade the mucous membrane of the conjunctivæ, while these structures are peculiarly resistant to invasion by other organisms, indicating that certain organisms have specific invasive powers. Evans believes that tissues with intrinsically poor blood supply are favorable to localization since the low supply of food and oxygen allows bacteria of low virulence but highly sensitive to oxygen to obtain a foothold. Rosenow believes that in regions of low blood supply a gradation of available oxygen affords optimum conditions for the growth of bacteria.

Dissemination of bacteria from foci of infection occurs by way of the lymphatics or the blood stream. Experimental evidence indicates that the latter is the most frequent avenue of infection and that the invasion is embolic in character!

In a bacteriologic study of 213 cases at necropsy we came to the conclusion that bacteria recovered postmortem have definite intravital significance and if the invasion occurs after death it very rarely, at least, occurs within the period after death covered by our studies. We

*Presented before the Medical Section of the Indiana State Medical Association, Indianapolis, September, 1921.

decided to determine whether these organisms possessed the same power of specific localization as those recovered before death. Certain teeth incriminated by ante mortem examination were available for careful study and were cultured. The organisms recovered were injected into experimental animals. In certain other cases the selective action of bacteria not recovered from foci was tested. The morbid conditions studied included nephritis, gastric ulcer, tuberculous meningitis, and peritonitis. Case 342540 is illustrative of the results.

Case 342540. Mr. V. S., aged sixty-eight years, came to the Clinic complaining of involuntary and frequent urination. Urinary symptoms had developed five years before, and symptoms of duodenal ulcer had been present intermittently for twenty years. Cystostomy was performed as a diagnostic measure; epithelioma of the bladder was found and a hopeless prog-

around two granulomata. From the apices of the teeth staphylococci and streptococci were cultured. Diplostreptococci were found in the smear and culture from the granulomatous material. From the kidney the culture yielded chiefly colon bacilli and a few chains of streptococci. Rabbits were injected with glucose-brain-broth cultures of infected tooth apices, others with a normal saline suspension of periapical pus, and still others with a glucose-brain-broth culture of the patient's kidney. Table I shows the results obtained.

Besides the results presented in Table I injections into four other animals were made. Streptococci and staphylococci isolated from the apex of a tooth in Case 342540 when injected intravenously in Rabbits 52 and 53 produced only gastric ulcers. Colon bacilli and a few streptococci isolated from the patient's kidney when injected intravenously into Rabbits 56 and

TABLE I
RESULTS OF INJECTION OF STREPTOCOCCI AND STAPHYLOCOCCI RECOVERED POSTMORTEM IN CASE 342540

Cultures from pus from the apex of a tooth in saline suspension

Rabbit 55		Rabbit 54	
I.....D		I.....D	
Ulcer of stomach.....2		Ulcer of stomach.....4	
Kidney1			
Streptococcus			
Rabbit 61	Rabbit 66	Rabbit 67	Rabbit 64
I.....D	I.....Cl.	I.....Cl.	I.....Cl.
Ulcer of stomach.....4	Ulcer of stomach.....1	Stomach0	Kidney4
			Stomach1
			Heart4
Staphylococcus			
Rabbit 65			
I.....CL			
Kidney4			Kidney4
Stomach1			Stomach1
Heart4			Heart4

Cultures from pus from the apex of a tooth in glucose-brain-broth

Rabbit 59		Rabbit 58	
I.....Cl.		I.....Cl.	
Ulcer of stomach.....4		Stomach 4 (Streptococcus)	Kidney 4 (Staphylococcus)
Kidney4			
Rabbit 60	Rabbit 62		
I.....D	I.....Cl.		
Ulcer of stomach.....3			
		Kidney4	
		Stomach1	
		Heart1	

I.—Intravenous injection.

D.—Animal died.

Cl.—Animal chloroformed.

Degree of involvement graded on basis of 1 to 4.

nosis given. The anatomic diagnosis at necropsy included a perforated gastric ulcer, duodenal ulcer, old healed duodenal ulcer, marked dental caries and sepsis, suppurative cysto-ureteropyelonephritis, with focal abscesses of both kidneys, and epithelioma of the bladder.

Six teeth were removed aseptically, around two of which there was periapical infection and

57 proved to be very toxic and no localization was exhibited.

Attention is called to the fact that when the streptococcus was isolated from the stomach of Rabbit 54 and injected alone, gastric lesions resulted in two of three animals. When the staphylococcus was injected alone it tended to localize in the kidney and heart, producing focal

abscesses, a rather characteristic behavior of this organism according to our observation when it is injected intravenously. Indeed, our observations have led us to believe that the staphylococcus does not tend to localize in the sense that the members of the streptococcus-pneumococcus group do. The staphylococcus always tends to focalize in certain structures, particularly the heart and kidney, but this occurs regardless of the source from which the organism has been isolated. This behavior of the staphylococcus is explicable on the basis of well known bacteriologic and anatomic considerations and ought not be spoken of as selective localization. This explanation does not mean that in this case the staphylococci recovered

have their counterpart in an unsuspected lesion of the patient.

The results of animal injections in five other cases of predominant renal lesions are tabulated in Table 2.

Reference may again be made to the gastric ulcers resulting in animals injected with organisms recovered from infected teeth in Case 342546 (Table 1). Two other cases of gastric ulcer were studied in which the teeth were definitely diseased. Organisms recovered from these foci when injected intravenously into rabbits produced gastric ulcers in three of four animals in one case and in each of two animals in the other case.

Two cases of tuberculous meningitis were studied in which there was an added pyogenic

TABLE 2
RESULTS OF INTRAVENOUS INJECTIONS OF ORGANISMS RECOVERED POSTMORTEM IN FIVE CASES
(Cultures in glucose-brain-broth)

Case	Animal	Organism	Source	Animal Passage	Effect on Animal	Lesions in						
						Brain	Heart	Lung	Peritoneum	Spleen	Stomach	Kidney
118818	R46	Aerobic bacillus	Kidney	First	Died	0	3	3	3	3	0	4
	R47	Aerobic bacillus	Kidney	First	Died	0	2	3	3	2	0	4
	R48	Aerobic bacillus	Kidney of R46	Second	Died	0	0	3	3	0	0	4
	R49	Aerobic bacillus	Kidney of R46	Second	Died	0	0	3	3	0	0	4
331409	R13	Streptococcus Bacillus coli	Kidney	First	Died	0	0	0	0	0	0	4
	R14	Streptococcus Bacillus coli	Kidney	First	Died	0	0	0	0	0	0	4
	R15	Streptococcus	Kidney	First	Died	0	0	0	0	0	0	0
	R16	Streptococcus	Kidney	First	Died	0	0	0	0	0	0	0
	R17	Streptococcus	Kidney	First	Died	0	0	0	0	0	0	0
90665	R103	Bacillus coli	Kidney	First	Chloroformed	0	0	0	0	0	0	0
	R104	Bacillus coli	Kidney	First	Chloroformed	0	0	0	0	0	0	0
	R105	Bacillus coli	Kidney	First	No necropsy							
	R106	Bacillus coli	Kidney	First	No necropsy							
336486	R44	Streptococcus hemolyticus	Blood	First	Chloroformed	0	0	0	0	0	0	4
	R45	Streptococcus hemolyticus	Blood	First	Died	0	0	0	0	0	0	4
334480	R19	Streptococcus	Kidney	First	Died	0	2	2	0	0	0	3

from the teeth could not be related to the renal lesions in the patient.

In our experiments in this case attention was directed to the teeth as a focus of renal infection, but we found that gastric ulcers were quite as frequently produced as renal lesions. This is significant, since gastric ulcers were found in the patient, and illustrates the value of knowing in a given case all of the lesions which can be focal in origin. It is possible that in the ante mortem study of lesions focal in origin, results which at times appear irrelevant actually

infection. From the brain in these cases diplo-streptococci were cultured. These organisms were demonstrated in the brain and cord by the Gram-Weigert method of staining. When they were injected intravenously in Rabbits 80 and 82 and subdurally in Rabbits 81, 83, and 85 they exhibited selective localizing power in the central nervous system of these animals.

In control experiments we have made similar intravenous and intradural injections of pneumococci, indifferent streptococci, and hemolytic streptococci in approximately the same dosage

as used in the foregoing experiments. In these control animals we have failed to produce any localization in the central nervous system. Thus it appears that the organisms in the two cases above possessed a potential affinity for the central nervous system, and this affinity was demonstrable both by intravenous and intradural injection.

Three cases of peritonitis, studied bacteriologically, had occurred without any preceding abdominal operation and at necropsy no intra-abdominal source of peritoneal infection could be ascertained after a most careful search. These cases fall into the class of cases of peritonitis designated as primary by Flexner. In two of the cases, cultures revealed septicemia. This finding suggests that in exceptional cases peritonitis may be primarily septicemia which localizes in the peritoneal cavity. Case 335984 is illustrative.

Case 335984. Mrs. H. R., aged fifty years, was admitted to the Clinic complaining of abdominal pain. The onset had been sudden and characterized by pain and tenderness in the right lower abdomen. One day later, vomiting had begun and the pain had shifted to the upper abdomen. The third day the abdomen had become enlarged.

The patient's condition was considered inoperable on admission. Death occurred two days after admission.

At necropsy a diagnosis was made of primary diffuse purulent peritonitis, early bilateral sero-purulent pleuritis, acute diffuse nephritis, and pyorrhea alveolaris. Cultures of the blood, spleen, peritoneum, apex socket, and canal pulp of a tooth all yielded hemolytic streptococci.

Mouse 1 was injected intraperitoneally with 0.5 c.c. of the culture from the peritoneal fluid of the patient. The animal died on the third day. In its abdominal cavity was a small amount of bloody fluid, and the intestines were covered by a fine fibrinous exudate. There were no other evident lesions in the body. Cultures of the blood, spleen, and peritoneal fluid yielded hemolytic streptococci. Similar results were obtained in three guinea pigs and one mouse.

Rabbit 23 was injected intravenously with 5 c.c. of a glucose-brain-broth culture from the tooth pulp of the patient. On the sixth day the animal was apparently ill and did not wish to move, and its abdominal muscles were very rigid. It was chloroformed. At necropsy the peritoneum was lusterless and the peritoneal cavity contained a small amount of cloudy fluid. The abdominal organs were covered with a thin sticky exudate. On gross examination no lesions were found elsewhere in the body. The peritoneal fluid, spleen, and blood yielded pure cultures of hemolytic streptococci.

This experiment suggests the possibility that organisms harbored in the infected tooth may have acquired sufficient virulence or have met with such a decrease in resistance that they were able to cause septicemia and peritonitis. It must also be considered that the organisms recovered from the infected tooth may have been a part of the general septicemic infection. These results may be significant with reference to certain cases of peritonitis following operative procedures in the abdomen and suggest that under certain conditions of disturbed resistance organisms contained in foci may acquire general invasive power, and a patient in such a condition would be a poor surgical risk.

Necropsies were performed carefully on all of these animals. Evidence of pathologic change was judged by gross findings, and organs grossly involved were sectioned for microscopic study. It would be obviously desirable to make a microscopic study of all the tissues in the body, but such a procedure assumes almost forbidding proportions, and in large measure the gross lesions will give a good estimate of the regions that are chiefly involved. When we speak of certain lesions being the only lesions found, we mean that grossly no other pathologic changes were evident.

Discussion. The arbiter in questions of focal infection must be the internist and not the specialist. The specialist may render an opinion as to the local condition of the foci. Only the man acquainted with the patient's general condition can safely recommend the removal of foci, and he will be due for disappointment if his diagnostic acumen is not exercised to its fullest extent. It is obviously useless, for example, to expect the removal of foci to ameliorate conditions if the pains are ascribable to neuritis due to pernicious anemia, or to root pains due to an early neoplasm, or Pott's disease. Even then recommendations are of value only if the specialist and internist control their judgment by carefully following their cases and supplement their knowledge whenever possible by bacteriologic studies and animal experimentation. Another source of disappointment lies in the fact that often we can eliminate foci only after the insult has been long repeated and the damage done is irreparable or self perpetuating. It is the present belief that in long standing cases secondary focalization, for example, in a joint, may be established which obviously may not be eliminated by the removal of the original focus! It is evident, therefore, that early diagnosis and early location of foci is highly desirable in order to secure the most satisfactory results.

SUMMARY

1. In our experimental work bacteria recovered from various locations at necropsy including foci of infection exhibited selective localizing power in animals.

2. This selective localizing power has been demonstrated in eleven of thirteen morbid conditions, comprising cases of nephritis, gastric ulcer, encephalitis, and primary peritonitis.

3. Our evidence illustrates a valuable method of testing the ability to diagnose certain foci as related to disease processes.

4. It is emphasized that the specialist may render an opinion concerning the pathology in a suspected focus of infection, but conclusions as to its importance and treatment are to be left in the hands of the internist.

5. Careful control of the clinician's and specialist's judgment concerning foci by following up their cases and, if possible, supplementing their knowledge by bacteriologic study and animal experimentation will endow their opinions with the greatest value.

6. Early discoveries of foci and their removal yield the most satisfactory results. Long continued insult may result in irreparable damage or a self perpetuating process in a given structure. In such cases a guarded prognosis must be given, although the patient should be given the benefit of a possible cure.

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DISCUSSION

DR. VIRGIL MOON (Indianapolis): It happened to be my good fortune to be working in the laboratory of Dr. E. C. Rosenow at the time he was collecting the evidence which led to his giving out to the medical profession this evidence of focal infection. I saw him excise from the deltoid muscles of a patient who was acutely ill with muscular rheumatism a bit of muscular tissue. I made sections of that tissue myself and demonstrated in it streptococci. Dr. Rosenow cultured a bit of the tissue and obtained a pure culture of streptococci. These were immediately injected into animals—rabbits, guinea pigs and dogs: and not only did

that organism localize in the muscles of those animals, but it localized in the shoulder muscles of those animals, giving a striking example of the selective action of the organisms.

I saw Dr. Rosenow isolate from the stomach mucosa streptococci and those cultures injected immediately into animals produced, as Dr. Barnes described, ulcers of the stomach. Not joint lesions, not muscular lesions, no localization in the gall bladder or the kidney or elsewhere, but in the stomach mucosa.

Again I saw him cultivate organisms from the gall bladder in cases of cholelithiasis, which organism when injected into animals immediately produced inflammation of the gall bladder. I have seen such performances, have seen the organism at the time it was first isolated, and then have had the experimenter show these lesions at points corresponding to those from which the same bacteria occurred in the patient, and not elsewhere. Such experiences cannot help but convince us of the selective affinity of these organisms under certain conditions. You, as internists with experience in various kinds of infection, have no doubt seen your patients with a diseased tooth or tonsil, with definite evidence of infection elsewhere in the patient, and you have no doubt seen those foci subside—not always, upon the removal of the original focus of infection. That should be to our minds evidence of the fact that there is something in selective localization, a selective tendency on the part of the organism to infect certain tissues. It is a striking fact that when these organisms have first been removed they give evidence of this selective localization, but after they have been cultured in the laboratory for a time they seem to lose this selective localization tendency and acquire an affinity for the joints and muscles, with rheumatism, and we get the affections of the joints and the muscles from these bacteria which have lost their particular selective affinity for the kidney, the gall bladder, the stomach mucosa, or other forms from which the organism was originally cultivated.

DR. GEORGE W. McCASKEY (Fort Wayne): I have been from the outset convinced of the value of Rosenow's conclusions in regard to the elective affinity of bacteria for different organs and structures. In fact, his work has been so scientific, and his facts so firmly established, that I believe we must either repudiate his facts, or in a general way accept his conclusions.

It was a brilliant conception to find the focal infections postmortem, collate them with pathology, and proceed to establish their etiologic relationship by animal experimentation, and this has been done in a most convincing manner. The complete control of all of the conditions, with the possible exception of the time elapsing between death and autopsy, has made it possible

to lay the foundations for definite conclusions, and the work subsequently to be done by the internist, with great scientific accuracy.

A clinician cannot, of course, work under such conditions, but it seems quite possible, and therefore assumes somewhat the character of an obligation, at least in many cases, using every possible check, to work the problem out clinically. Everyone of experience recognizes the tremendous difficulties which we encounter clinically in "running down" a focal infection, which we feel certain exists somewhere. The teeth and tonsils are, of course, the chief points of attack, and too frequently the only ones, as peri-nasal sinuses, gall bladder, appendix, prostate gland, etc., etc., may be guilty.

In regard to the teeth, the difficulties of interpretation are very great. While it looks on the surface like a dental question, the conclusion is forcing itself on my mind that the clinician must ultimately make his own decision. One dentist will say, "take them out", and another, with the same evidence, will say they are harmless; which leaves the patient and the clinician "between the devil and the deep, deep sea".

Having found the focus, or abscessed tooth or tonsil, we cannot say at once that it is the cause of the pathology, any more than we can say that a positive Wassermann reaction points us to the main etiology in any given syndrome presented to us and associated with a positive Wassermann reaction. This work of Rosenow and his collaborators seems to point the way to the solution of this problem in many cases, and Dr. Barnes emphatically tells us that the responsibility is now up to the internist. This is certainly adding a few more straws to the load which we were carrying, but we will accept the responsibility with the best possible grace.

DR. HENRY E. ALBURGER (Indianapolis): I think we are ready to assume that the organisms are specific, that they have special tissues which they invade, and the point we internists are up against is a vexed one because we are dependent, I feel, upon the character of the work done by the men who ultimately remove the focus of infection. If you send a man to a dentist you are dependent upon the opinion of that dentist. He may be an up-to-date man or a very un-up-to-date man. I have had dentists refuse to take out teeth which I knew were infected, and were afterward proven to be so. I have seen many cases in which teeth were improperly removed—simply pulled out without removing the infection at the root. I have known cases in which we were able to demonstrate, fifteen years after extraction, that there was a granuloma at the apex which was still the source of local infection. I feel, therefore, that we are still responsible after sending

patients to the dentists and nose and throat men, and that we are responsible for the work done by them on our patients. We cannot safely send a patient with focal infection to just any man either in nose or throat work or in dentistry.

DR. FRANK WYNN (Indianapolis): With the practitioner there is the confusion of mind as to where the focus of infection is that gives rise to the neuritis or rheumatism. We look at the teeth, the tonsils, the gall bladder, and everywhere we can think of and then say, "Where is it?" The tendency of the time is to blame the thing that is easy to find. That is, we look in the throat and if the tonsil shows any suspicion of disease how easy it is to say that it must come out. Or, if there is any reason at all to suspect the teeth are responsible, and especially if some over-enthusiastic radiologist makes a picture which arouses hope, here seems an easy way to get rid of the trouble and we say, "Take out the teeth." I think we are too drastic. My point is this, if Dr. Barnes can, in the post-mortem room, find the connection between—let us say the organisms at the root of an offending tooth and a gastric ulcer, then why should not every operating man make similar demonstrations? How many men extracting teeth are carefully studying the sockets from which they were removed? How many are making cultures and trying to determine whether there is any connection between the trouble complained of and the bad teeth? How many are making cultures from the tonsils when they are removed to see if there is a definite relationship between rheumatism and the tonsil removed?

DR. ROBERT V. HOFFMAN (South Bend): In regard to the nose and throat men, I know one man who has consistently taken cultures of every tonsil he has removed during the past two years. Almost without exception they have shown streptococcus hemolyticus, sometimes staphylococcus, but nearly always the streptococcus hemolyticus. He has not injected animals but he does make the cultures in practically every case. He has been unable to derive any facts of practical value from his findings.

DR. ARLIE R. BARNES (Rochester, Minnesota—closing): In answer to Dr. McCaskey's question as to how long the organisms were cultured after death, our postmortems were made about six hours after death, on the average.

I think there is a little hope for the profession on the standpoint of passing upon foci of infection, especially of the teeth, and I think the Mayo clinic is rendering much service in standardizing these criteria. They are culturing all these teeth routinely to decide whether they are infected and whether their radiological judgment is confirmed or discounted. I think many

teeth are pulled and a focus of infection left behind, as Dr. Alburger said, and I think the time is coming when the teeth will be removed surgically. The Mayo clinic is doing the external alveolectomy, chiseling out the bone, lifting the tooth out carefully, cleaning out the socket and sewing up the gum. The healing is perfect and they get very excellent results.

We find that if we carry the cultivation through more than one artificial media we get into trouble, unless we cultivate on a special media by which we can keep up the virulence of the culture a little longer. On blood agar plates the selective localizing power is lost very quickly.

I wish to thank the gentlemen for elaborating this paper in their discussion, and I consider it a great honor to have had the opportunity of addressing this body.

TRACHOMA OR FOLLICULOSIS AMONG SCHOOL CHILDREN*

J. A. STUCKY, M.D.
LEXINGTON, KENTUCKY

It is an interesting coincidence that ten years ago today in this city at the meeting of the American Academy of Ophthalmology and Otolaryngology, I presented an informal report on "Trachoma and Ophthalmia in the Kentucky Mountains". My report was simply a "heart-to-heart talk" with the leading ophthalmologists regarding the greatest problem I had ever confronted. It was in reality an "S. O. S." call for help. My curiosity, not unmixed with ambitious conceit, had led me into the mountains to ascertain where the large number of cases of trachoma that I saw were coming from, and I was determined to ascertain the cause and to remove it.

As a result of my report, the House of Delegates of the A. M. A. notified the United States Bureau of Public Health in Washington to get in touch with the State Board of Health of Kentucky and ascertain if my report at this meeting was not an exaggeration. As a result of this, a few months later, at the request of the State Board of Health of Kentucky, Dr. Jno. McMullen, one of the expert diagnosticians in trachoma, representing the U. S. B. P. H., accompanied me on one of my Mountain Clinics and reported to the Board in Washington and to the State Board of Health in Kentucky that he found the percentage of the cases among the inhabitants in "the heart of the hills of Kentucky" was more than twice what I had estimated. At the earnest solicitation of our State Board of Health Dr. McMullen was ordered to remain in the Kentucky Mountains, with sufficient help to arrest or eradicate the disease.

Five hospitals were equipped with surgeons and nurses at each, and several thousand cases of the disease were treated under the supervision of Dr. McMullen. The result of this has been a very decided decrease in the activity of this disease. Many have been relieved of their suffering and their impaired vision restored. Thus you see that in this city a decade ago, a great work for humanity was started, and I am delighted to report the great progress we have made in the treatment of the disease. We have not only been able to relieve but to arrest its ravages, though I am humiliated to report that the specific etiological factor in its production has not been ascertained, and I am hoping that today, at this meeting, we may receive some suggestion and cooperation from you that will enable me to report in another ten years or less that this etiological factor has been isolated, the disease controlled, and that what has for so long a time been a reproach to ophthalmology has been removed.

As a result of the publicity given this work in Kentucky, through the magazines, medical journals and bulletins published by the U. S. B. P. H., the whole civilized and scientific world, including both Europe and America, speak of the mountains of Kentucky and Eastern Tennessee as being one of the hotbeds and breeding places of what the government has pronounced "a communicable and destructive disease of the eye."

As near neighbors of Kentucky, with whom we have much in common, I feel that I have the right to come to you with a continuance of my heart-to-heart talk of ten years ago, asking and expecting helpful suggestions from you that will lead to a concerted, concentrated and persistent effort on the part of the medical profession, philanthropists and sociologists to spare no effort or expense to ascertain and isolate the specific etiologic factor in the cause of trachoma.

As I stated ten years ago, I repeat today, I am not certain whether it is of bacteriological origin, whether it is a fly-borne, insect-borne, house disease, or whether it is due to a specific micro-organism, but I am convinced that it is not as actively infectious as I thought it then, and is less amenable to permanent eradication; and I am more and more convinced that it requires for its solution in addition to medical and surgical treatment more sanitary and hygienic living. Wherever high-grade schools exist, with community nurses and the laws of sanitation and hygiene are observed, the ravages of this disease have diminished.

Within the past year much interest and discussion have been caused among ophthalmologists, boards of health and school boards, especially of the South, regarding the increase of this disease in insidious form in the public

*Read before the Section on Ophthalmology and Otolaryngology of the Indiana State Medical Association, Indianapolis Session, September, 1921.

schools. This interest and discussion have extended to the far West, especially where the disease has been found among the Indians in one or two places, and considerable heated discussion has taken place over the difference in diagnosis between conjunctival folliculosis and trachoma. Objection has been raised in some localities to the somewhat radical procedure advocated by the public health officials in dealing with suspicious cases. Because of this discussion, led chiefly by Dr. J. W. Jervey, Greenville, South Carolina, a committee was appointed at the meeting of the A. M. A. at New Orleans, Louisiana, in 1920, to go carefully into the subject and report at its next meeting, which was held in Boston this year, the points of differentiation between folliculosis and trachoma, with suggestions as to what should be done. This report, with which you are no doubt thoroughly familiar, was made somewhat at length to the Section on Ophthalmology, and being a member of that committee, I have nothing to add, but will repeat my discussion of Dr. Jervey's paper* before the Louisville and Jefferson County Medical Society, May 2, 1921.

The greatest problem confronting the country today is how to handle the trachoma situation. The United States Bureau of Public Health has accomplished much good work, and so far as I am able to judge the progress of the disease in the mountains has been arrested, its ravages have been mitigated, but whether many cures actually have been effected I have yet to decide. I confess that I do not know when trachoma is permanently cured.

The citation of a few (out of a large number) concrete cases may be interesting: I operated upon a child (female) for trachoma nearly twenty years ago. The disease recurred from time to time and she was subjected to several subsequent operations. Dr. McMullen, U. S. B. P. H., an expert in this line of work, operated on her once; later one of his assistants operated her. She is now about thirty years of age and came to me a few days ago with another "flare up" of her trachoma. Inspection shows the conjunctiva brawny, smooth, many cicatrices are present, and characteristic new trachoma bodies are visible, with entropian both upper and lower lids.

I recall a prominent Methodist minister upon whom I operated fifteen years ago. I thought he was cured and told him so. Last winter he returned with the most severe and intractable "flare up" that I have had to deal with in many years. I consider trachoma one of the most mysterious and treacherous of diseases.

There is just now a great interest among medical men of the United States about the

differential diagnosis between folliculosis and trachoma. And, candidly, notwithstanding our large experience with the disease in the mountains of Kentucky and Tennessee, I do not believe a differential diagnosis can always be made in the early stages.

A few years ago twelve or fourteen cases of trachoma were reported to me by the Medical Inspector of Schools in Lexington. Upon examination of these cases I confirmed the diagnosis and the children were excluded from school. They all had evidence of acute trachomatous folliculosis with discharge and photophobia. I ordered these children to the hospital for operation, but not one of them reported. I then appealed to the Board of Health without any immediate results, and in the meantime the inflammation and discharge subsided, under care of the district nurse who was giving the treatment I had ordered. The Health Board asked me to examine the children again a month later, which I did, and at that time the disease did not look so much like trachoma but more like folliculosis, so I concluded that I must have been mistaken in my original diagnosis. To make a long story short, these twelve or fourteen children, and thirty or forty other border line cases, have been kept under close observation for four years. They showed marked improvement after removal of their tonsils and adenoids, and were permitted to return to school. It is evident that they did not have trachoma.

My ideas about the diagnosis and treatment of trachoma have undergone material changes during the last few years. In true trachoma I believe in being radical, so far as treatment is concerned, but we should be certain that we are dealing with true trachoma before resorting to radical measures. I am not sure that I can make a diagnosis of trachoma in the early stages, and we are waiting for somebody to determine definitely the etiology of the disease. We are told in the beginning trachoma looks like ordinary conjunctivitis, but if extensive hypertrophy occurs, if the conjunctiva cannot be stretched, and the blood vessels plainly seen, especially if other members of the family or anybody in the neighborhood with whom the patient comes in contact show conjunctival cicatrices, then I at once convict that patient on circumstantial evidence and treat the case as trachoma.

I have just gone through a long siege in the committee on trachoma appointed by the Section on Ophthalmology of the American Medical Association, with especial reference to differential diagnosis of folliculosis and trachoma, and my views in brief are as follows:

"In my mountain clinics it has been difficult to decide whether a case in the acute stage

*Folliculosis or Trachoma Among School Children—
J. W. Jervey, Greenville, S. C.

was trachoma, but if the conjunctiva was thickened and inflamed, and there were other cases of the disease in the family or the neighborhood, the case was regarded as suspicious and treated as trachoma. In the second stage my differential diagnosis between trachoma and folliculosis of the conjunctiva was based on my observation that in simple follicular hypertrophy (that is, adenoid hypertrophy of the sub-epithelial layer of the conjunctiva) the conjunctiva is easily and evenly put on the stretch, the whole membrane being elastic and the blood vessels easily seen. But where the hypertrophy involves the whole body of the conjunctiva (papillary hypertrophy or papillary thickening) then the conjunctiva cannot be stretched and the blood vessels are not visibly outlined. While this is a pathological differentiation, it is applicable in the study of every case. I prefer the term *adenomatous conjunctiva*, inasmuch as it covers the ground whether or not there are inflammatory phenomena present, and does away with the necessity of distinguishing between folliculosis (without inflammation) and follicular conjunctivitis (folliculosis plus inflammation).

Whether trachoma exists in epidemic, pandemic or endemic form in the public schools of the South I do not know, but I am sure it does not in Lexington. I see more of it now in central Kentucky than ten or fifteen years ago, and the majority of the cases come from the type of individuals and surroundings living in the mountains of Kentucky; but I have seen persons with trachoma who were reared in affluence, with perfect sanitary and hygienic surroundings. One was a prominent lawyer, and another the minister to whom reference already has been made.

The disease is undoubtedly conveyed from one person to another by morbid secretion, but whether this contains micro-organisms or some other infective substance we do not know. In my opinion trachoma in the terminal or cicatricial stage is not contagious; it is contagious only in the active stage when there is secretion. My observation has been that pannus is almost pathognomonic of trachoma; in fact, I do not recall having seen a single patient with pannus who did not have trachoma.

Differentiation between trachoma and folliculosis cannot always be made by sight nor even by the microscope, and where we cannot be positive, I believe we should give the patient the benefit of the doubt, and treat the case as suspicious. I do not believe every suspicious case should receive the radical treatment of graftage. To properly do this operation requires surgical skill and judgment.

There are certain phases of the trachoma problem about which we must be careful. Some

of the after-effects of trachoma cannot be relieved by any means of which I have knowledge. The following are quotations from several who discussed the question raised in Dr. Jersey's paper on Folliculosis or Trachoma Among School Children:

DR. J. O. CARSON, Bowling Green, Ky.

"I do not believe early cases of trachoma ever will be positively diagnosed until the specific causative factor has been demonstrated by bacteriological and microscopic investigation. Some observers claim to have isolated the causative agent, but their findings lack confirmation. Until the etiology is settled, a positive diagnosis of trachoma cannot be made unless scar tissue is present, and then it is too late to accomplish very much by treatment."

"Epidemics of trachoma occurring in armies is an entirely different matter. Owing to their surroundings soldiers are probably oftener exposed to exciting causes than are civilians, and therefore trachoma is not uncommon. Many cases were observed in the various camps during the war."

"I am aware of instances where folliculosis was treated as trachoma with considerable destruction of tissue and resulting deformity. The operation usually performed for trachoma may seem a simple procedure, but sometimes the patient is in worse condition afterward than before. For that reason I am inclined to treat the patient by simple measures until the nature of the disease is positively determined. It hardly seems necessary to say that patients with trachoma should only be treated by someone who has had experience in that class of work."

DR. JNO. McMULLEN, U. S. B. P. H.

"If a case is counted as suspicious of trachoma, of smallpox, or of any other communicable disease, if we honestly believe it is suspicious, is it fair to permit the patient to associate with others to determine whether or not they will contract this particular disease? Those of us who have been working in trachoma for a long time and have seen its detrimental and damaging effects upon the eye, believe that the disease has certain potentialities, and that suspicious cases should not be permitted to come in contact with the well. That should be our attitude in regard to all communicable diseases."

"We see cases of trachoma affecting one eye, even progressing to the stage of cicatricial tissue formation, the other eye not being involved. We have often been asked why that is. I do not know, but we realize there is a great deal about immunity that we have yet to learn. The same question might be asked concerning gonorrhreal ophthalmia; why do not all men with gonorrhea have ophthalmia, and why do not both eyes become infected? A similar statement might be applied to scarlet fever and many

other diseases; why does not the disease affect every member of the family? When speaking of the cure of trachoma of course I realize that in some instances the disease may recur, but this is no reason why we should not make an effort to cure it.

"In 2,900 cases of trachoma in which our records are known to be complete, though many of them are incomplete, because some of the patients live in remote districts and the end-results cannot be determined until we can again examine them, of the 166 children under five years of age included in the above, 19 had ulcer, 23 impaired vision, 60 had photophobia, 25 had pannus, 3 were blind in one eye and 1 in both eyes. Between five and ten years of age there were 631 cases. I will not take the time to present further statistics except to say that 50 percent of our trachoma patients had photophobia; from 25 to 30 percent had pannus; 10 to 15 percent had ulcers. I have about concluded that blindness may not be the worst result that can happen to a child with trachoma. With deformity of the lids, with damage to the ocular structures, with dwarfing of both body and mind as these children develop, simply because their entire lives are spent in shielding their eyes from the light, their condition is indeed pitiable."

DR. S. G. DABNEY, Louisville, Ky.

"I believe all suspicious cases should be treated as trachoma. They are rare in our community and from what I have read they are elsewhere outside of certain localities. Genuine cases are not always from the mountainous regions. I have seen a good many cases of trachoma from southern Illinois (hence the name 'Little Egypt' some say), a few from Jefferson and other counties in Kentucky. However, the majority of the genuine cases of trachoma I have seen were from the mountains of Kentucky and Tennessee. I have seen a few cases in the school children of Louisville. It hardly seems necessary to state that all cases of genuine trachoma should be operated upon at the proper stage, but often operation fails to cure when at first it seems perfectly satisfactory."

DR. ADOLPH O. PFINGST, Louisville, Ky.

"In trachoma there is a thickening of the mucous membrane between the follicles; in folliculosis the follicles seem higher than in trachoma, but this is more apparent than real, the lymphoid follicles are of the same size in each disease, but owing to the thickening of the conjunctiva in the early stage of trachoma the follicles appear less elevated than in folliculosis in which the conjunctiva is less swollen."

DR. J. W. JERVEY, Greenville, S. C.

"No one can differentiate between folliculosis and trachoma in individual cases; the follicles in

the early stages are absolutely indistinguishable; but when there are hundreds of cases of conjunctivitis in children, with no papillary hypertrophy and no cicatricial tissue, pannus nor anything else definitely diagnostic of trachoma after prolonged observation, it may be positively stated that there is no trachoma among such children."

Having given briefly my own views and those of several leading oculists of Kentucky who see many of these cases, also the statistics of the cases seen in Kentucky by the representatives of the U. S. Bureau of Public Health Service, as well as their attitude on the trachoma question—and since the report of the committee appointed to define the differential diagnosis between trachoma and conjunctival folliculosis has been adopted by the Section on Ophthalmology of the A. M. A., what more shall we do? Shall we continue to combat conditions and not causes and to fight symptoms and sequelæ instead of etiology?

I am beginning to think that the contagiousness or communicability of trachoma is on a par with tuberculosis, in that it is not actively contagious but is contracted by long continued or repeated exposure to the infection, and when the same thought and effort shall be given to ascertaining the causative factor of trachoma, as was given to tuberculosis, the problem will be solved, but until then the greatest good to be accomplished will be by the Scientific Medical Man, the Public Health Nurse and the Teachers of Hygiene and Sanitation.

DISCUSSION

DR. E. M. SHANKLIN (Hammond): In my opinion the all-important factor in the management of the trachoma situation, not the individual cases but the whole question, is the education of the oculists. I was disposed a year or so ago to regret the disputes that arose concerning diagnosis, but as I view it now that discussion regarding the differential diagnosis between folliculosis and trachoma has been a veritable godsend.

In our own state I recall a report made by Dr. J. W. Neideger of the United States Public Health Service relative to the trachoma situation in Bartholomew County. It seems that when he first went down there he was advised there was no trachoma in that county. His preliminary inspection of the country schools, in two townships, brought to light 38 cases of active, second or third stage trachoma. About that time, less than ten years ago, I made inquiry of several doctors in the more populous communities in Indiana and found the reports varied; some oculists claiming there was no trachoma in their communities while others said

they saw from fifty to seventy-five cases annually. That is not so far in the past as to make me change my statement that the education of the profession is a very important thing if we are to properly approach this very important question.

I like the Doctor's statement relative to the differential diagnosis between folliculosis of the conjunctiva and trachoma, and that in the first stage trachoma is difficult to diagnose. I also liked his differential diagnosis in the second stage relative to the tenseness of the conjunctiva and the appearance of the vessels.

The Doctor speaks of grattage, which has come to be the accepted treatment. As a matter of historical interest I might mention that several years ago I heard of the treatment of trachoma by a non-medical man down in southern Indiana. The treatment was as follows: A little stick of copper sulphate was whittled out one inch in length and about a quarter of an inch in thickness. This was placed in an ounce of 50 percent alcohol with a piece of alum about the size of a quail's egg, and a piece of indigo about the same size. The stick was left in there for 24 hours. The upper lid was then inverted and the stick rubbed twice—no more—across the lid. A large basin of boiling water was then brought out and put on a chair in front of the patient, the patient's head enveloped in a large cloth, and he was forced to sit with his face over that hot water and undergo the steaming process for thirty minutes, or until the pain subsided. That treatment was used every other day for a period of two weeks, and failure, according to the history that goes with the story, was practically unknown.

Dr. W. A. Spurgeon of Muncie sent an emissary down there and got the formula by paying for it, and he tells me that until ten years ago he used that treatment with wonderful results.

DR. BERNARD J. LARKIN (Indianapolis): It is a great pleasure and benefit to hear such an eminent authority as Dr. Stucky attack the trachoma problem and it is regrettable that we have not more men to do such scientific work along these lines.

Trachoma is prevalent in Indianapolis, as was shown by the survey during the year 1916. I do not remember the percentage, but it was high, both children and adults. The conclusion arrived at was that it would be better to concentrate on the children because the adults seemed prone to ignore or antagonize our efforts to relieve. With our follow-up system we feel that we accomplished a great deal.

The greatest difficulty encountered was the lack of cooperation on the part of other oculists.

For instance, in one district whenever a supposed case was excluded from school the principal immediately got in touch with an oculist, who would give this child a certificate to return to school. However, the Board of Health finally decided that when a child was excluded from school it should not be permitted to return until the survey thought there was no danger.

Dr. Stucky has thoroughly covered the treatment, and I wish only to emphasize that we always get better results in children. I would urge the members of this Association to give especial attention to them.

DR. ALBERT E. BULSON, JR. (Fort Wayne): To Dr. Stucky belongs the credit of having called our attention to the wide-spread prevalence of trachoma in the mountainous districts of the South. The situation demands not only conscientious and skilled treatment of the unfortunates who are suffering from trachoma, but an earnest effort should be made to discover the etiology of the disease with a view to more effectual prevention.

To my notion the Federal Government should expend more money and more time in an effort to determine the etiology of the disease. It also is a work that could well be taken up by the Rockefeller Foundation which, as you know, is spending much time and money in investigating typhus fever, yellow fever, hookworm and some of the other disastrous diseases.

With the public the feature that deserves more emphasis is the fact that trachoma, like all eye diseases of contagious character, is conveyed by fingers, roller towels, handkerchiefs, etc. Much may be accomplished in the way of preventing eye diseases if children are taught that nearly all communicable eye diseases are conveyed by the fingers and consequently the fingers should not be used to rub the eyes.

So far as the recognition of trachoma is concerned I think Dr. Stucky has hit the nail on the head when he says that neither he nor anybody else always can make a diagnosis of trachoma in its acute stage. I have had considerable experience in the treatment of trachoma and while I am satisfied that I can recognize the disease in the secondary stage yet the acute stages of the disease are uncertain of recognition. There must be a specific cause for the disease, and with its discovery there can be no excuse for not differentiating trachoma from any other condition. I made a diagnosis of trachoma in one of our public institutions, an orphan school for girls, where the disease was fairly acute, but that diagnosis was based upon the fact that the disease developed shortly after the admission of an inmate having sore eyes which from the history and appearance of the condition justified a diagnosis of trachoma. My advice that the affected children be isolated was

not accepted and the disease went through the whole school, resulting in much damage and the necessity for treatment and care for years afterward.

Concerning the question of treatment I want to say that, aside from surgical operations, including grattage and excision of follicles or thickened tissue, I think there is nothing better than sulphate of copper. It is a very painful treatment when the pure stick is employed, but there is no question about its efficaciousness. Many years ago I saw a large number of cases of trachoma in the secondary stage which appeared among the foreign population in our city, and at that time Dr. Prince, of Springfield, Illinois, who happened to visit me about that time, recommended a saturated solution of sulphate of copper in glycerine as a routine application, the solution to be diluted as required in order to offset any reaction not well tolerated by the patient. Personally I am satisfied that a severe reaction is beneficial and shortens the time required for recovery, so I usually give an adult patient a quarter of a grain of morphine, and twenty or thirty minutes later, following local anesthesia of the eye, the pure copper stick, or the saturated solution of copper and glycerine, is applied to the everted lids thoroughly. This is repeated about once a week, and in the intervals between treatments a weaker solution of copper is used by the patient at home. I have seen rather remarkable results from this plan of treatment, and it is especially valuable in those cases where the pannus is well marked. Patients usually are asked in advance whether they will stand for the punishment, and invariably they will submit when they are told that the results justify the discomfort.

Again I wish to reiterate that I think we should bring pressure to bear upon the Federal Government, and even the Rockefeller Foundation in an effort to enlist the cooperation of those agencies in determining the etiologic factor in trachoma. We can and should discover the cause, but it probably means an expenditure of more time and more money than can be devoted to it by any agency outside of that subsidized by the Federal Government or Rockefeller Foundation.

DR. GEORGE F. KEIPER (Lafayette): Every case of trachoma is potential for great harm in inoculating many more people. Some twenty-five years ago at the St. Joseph Orphanage and Manual Training School just outside the limits of the city of Lafayette we had a very severe epidemic of trachoma. When the sister in charge first called me I found four boys with sore eyes; at the next visit I found four more. Then I ordered an inspection of the school and found 95 cases afflicted with trachoma in various

stages of the disease. We segregated these boys and did not allow them to come in contact with the other boys, but it was two years before the last case was dismissed as cured. When we traced this epidemic to its origin we found one boy was responsible for it. This boy had recently come from a similar institution in Fort Wayne. I wrote Dr. Bulson, and he investigated the institution there and found 125 cases of trachoma.

Dr. Bulson in his discussion has covered some of the things I wanted to say, but I would like to emphasize some of his points.

First, in reference to Prince's solution. It is ten percent solution of sulphate of copper *in glycerine*. One drop of this solution is put in ten drops of previously boiled water, left to cool. It is then used freely in both eyes, every four hours. The strength of the solution is gradually increased by leaving out a drop of water to the dose daily until one drop of the solution is used in ten drops of water. It must not be used any stronger, and it must be used as above. It will not admit of any modification.

Second, when we are forced to treat these cases mechanically there is no better way than to sandpaper the conjunctivæ of the everted eyelids. I like this better than the roller forceps.

Third, the differential diagnosis between folliculosis and trachoma is difficult at times, but a frank case of trachoma should be difficult to recognize. Even the stretching of the eyelid will at times fail to give a positive diagnosis. When in doubt, treat the case as trachoma, but avoid violent means like grattage or even sandpapering the conjunctival surface of the eyelids.

Fourth, the sequelæ are numerous and oftentimes tax the patience and ingenuity of the doctor—but that is another tale.

DR. JOHN R. NEWCOMB (Indianapolis): You have heard from Dr. Stucky the tragedy of trachoma, and it is a tragedy. But, gentlemen, we are fighting in the dark. It is not a fair fight so far, and we must have light on it. As Dr. Bulson mentioned, and as suggested at the Kansas City meeting of the Academy, why should the Rockefeller Foundation spend its millions in South America, when it could spend the same amount of money in a scientific investigation of trachoma and obliterate, in years to come, this horrible plague that is in our midst? It is right here with us. We find hundreds of cases in this city—yes, thousands. For that reason I say that none of you can diagnose trachoma. I defy any man in this room to make an absolutely accurate diagnosis of trachoma. It can't be done. As for differential diagnosis, it means nothing.

I simply wish to be a ditto mark to all that Dr. Stucky has said; but I beg of you to realize

that this situation is a disgrace to ophthalmology today. Let every ophthalmological association, every group of ophthalmologists, get back of this thing, get back of your bureau of investigation, and everybody dig down in his pocket and help.

DR. B. D. RAVDIN (Evansville): Somewhere in the foreign literature—perhaps Dr. Bulson may enlighten me—I read that one of the observers found that almost every one of the children who had trachoma responded to the tuberculin test, and by giving that test you can save time.

Personally, I have not investigated this question, but it seems to me that since none of us seem to know very much about it, we should try out these treatments that have been mentioned. Since the observers claim that children who have trachoma do respond to the tuberculin test, why not try it out here in America?

DR. D. O. KEARBY (Indianapolis): Not being an eye man I cannot discuss this paper except as it appeals to me from the horrible picture that Dr. Stucky has presented.

The thing that appeals to me is a point our chairman touched upon in his paper, and that is that we should go further back than having the Rockefeller Institute or the Government send an isolated man into some community to take up this matter. We should begin to teach the public some of these things. When you stop to think of the dollars that are spent in schools and on teachers, in order to raise up a child to fill a special position, or handle a job of some sort to make a few dollars, when there is not a single cent spent anywhere for the purpose of teaching him how to take care of himself—it is a tragedy, and I feel that somewhere (I don't know who is going to do it if the medical profession does not) there should be an organized educational effort, an arrangement made by which pupils in the public schools can be taught something with reference to how to prevent disease, rather than have them come to us for treatment after they have it.

DR. STUCKY (closing discussion): I greatly appreciate the generous and sincere discussion of my paper and I feel more encouraged about the future in regard to the solution of this great problem of trachoma than ever before, because I feel that genuine good will result from what has been said in the discussion. It is no exaggeration to say that the half has never been told regarding the tragedy being enacted by the scourge of trachoma in the mountains of Eastern Kentucky, and the problem is a Public Health one, because it concerns not only the people in the mountains but all with whom they come in contact. It is no reflection on the ophthalmologist who sees only a few cases each

year when he says he is not familiar with the disease. In the first stage it is most difficult to differentiate true trachoma from other well known diseases of the eyelids.

The public must be taken into our confidence and educated to the real condition and danger that exists, and when it is aroused it will meet the situation as it always has done through assistance to and cooperation with the medical profession. Fortunately, so far, we have never had an epidemic of trachoma, but if we should and a similar percentage of the public were inoculated and afflicted as they were by influenza a year or two ago, the suffering and sorrow that would result is almost unthinkable.

I purposely did not say much about the treatment of trachoma, but I do not hesitate to say that I do not believe that grattage will cure the disease, though it puts the eye in condition to enable us to do more for them afterwards, and the subsequent treatment is most important. I think more and more of the old copper treatment for trachoma, especially for the patient to use at home. There is nothing superior to it, though I also use a ten percent solution of trichloracetic acid rubbed into the trachomatous lids. Wherever we have schools, public health nurses, and close attention to personal sanitation and hygiene we have greater success in dealing with the disease.

A CASE OF ECLAMPSIA WITH 42 CONVULSIONS

TREATED BY CAESARIAN SECTION, PHLEBOTOMY
AND BLOOD TRANSFUSION: SURVIVAL OF
BOTH MOTHER AND CHILD

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The patient, aged thirty years, entered the Robert W. Long Hospital on April 5, 1919, near the middle of the ninth month of her second pregnancy. (The first pregnancy had been uneventful and had terminated in a normal delivery.) There had been five convulsions within the last seven hours. Each convolution had been more severe than the preceding one and the intervals between were successively shorter.

Six weeks prior to admission she had had an attack of influenza which had been followed by a marked albuminuria. At the age of ten years and again at the age of twelve years she had had a facial paralysis of the right side of the lower neurone type. As a child she had been obese but had become thin at the establishment of catamenia at the age of fourteen years. No other significant facts were elicited. The acute attack was ushered in by a suddenly developing

headache, epigastric pain, and blurred vision, followed by the convulsions.

Physical examination upon admission: Temperature 104.6 F. Pulse 110 and Respiration 24. She was a robust woman of the stout type, with dry skin and edema of the extremities. The sclera were clear. The pupils were round and reacted to light and accommodation, with the left slightly larger than the right. There was some edema of the nerve heads. The thyroid showed moderate general enlargement. The lungs were resonant throughout, and the breath sounds were clear. No enlargement of the heart was found by percussion, no thrills nor shocks were felt, and no murmurs were heard. The liver dullness extended from the sixth rib to the costal margin in the midclavicular line. The spleen was not felt. The knee jerks were increased but equal. Urinalysis showed a heavy coagulum of albumin, many granular casts, and a few waxy casts. The blood pressure was 180 systolic and 120 diastolic. The fetal heart rate was 134 per minute and was heard in the left lower quadrant. Pelvic examination revealed a cervix which was undilated and rigid. From these findings cæsarian section was considered preferable to any method of vaginal delivery.

Treatment:

(a) Cæsarian section: This was done under light ether anesthesia immediately after admission to the hospital. Very little hemorrhage occurred. The abdomen was closed very securely. A living babe was obtained, but respirations were initiated only after considerable difficulty.

(b) Phlebotomy: This was resorted to only after some hours had elapsed and more convulsions had occurred. In all 1200 cc. of blood were withdrawn.

(c) Blood transfusion: In order to replenish the blood volume 625 cc. of whole blood were given, from the husband, by the Kimpton-Brown method. It was hoped that the fresh blood would exert a beneficial influence upon the course of the disease.

(d) Various supplementary measures. Morphine was given freely. At the very beginning a fluid intake of 3000 cc. per 24 hours had been instituted, and this was maintained throughout the course of the convalescence by means of normal salt solution intravenously and proctoclysis, and later by stomach tube as improvement of condition became apparent. Hot packs were given, for short intervals, on two occasions.

Convalescence. Subsequent to the cæsarian section there were no convulsions for two hours, during which time the patient roused sufficiently to inquire about the babe. Beginning after two hours and continuing for thirty hours there

were 37 convulsions. In the last two hours of the period there were rapidly recurring seizures of from one to three minutes' duration, with intervals of from four to six minutes of coma. Once during this time the rectal temperature rose to 107.3 F. It was combated by means of ice packs and ice enemata. After the cessation of the convulsions there was profound coma for 48 hours, followed by a gradual recovery of mental and muscular powers. Aphasia, which was present at first, gradually cleared, although slowly. A paralysis of the right arm and leg changed to a weakness and finally there was complete restoration of function. The patient was discharged on the fortieth day after admission.

The course subsequent to the discharge from the hospital has not been entirely satisfactory. The child is vigorous and healthy and although too young as yet to give evidence of mental inferiority seems to be quite normal. The mother's mind has not recovered completely. At the present time, two and one-half years after the illness, her mentality is about that of a child of twelve or fourteen years.

The convalescence of the mother in this case presents nothing unusual. In fact paryses, aphasias and affected mentality are rather uniformly the rule. However, recovery is unusual in a condition of such severity, and to just what therapeutic measure it is attributable is not plain.

Dold^{1,2} showed that blood serum would neutralize the toxic properties of certain tissue extracts. Obata³ demonstrated that the ability of the blood serum of women with eclampsia to neutralize the toxic products of placental extracts was diminished or absent. From the above mentioned data Bell^{4,5} reasoned that blood transfusion was indicated in eclampsia and treated a case in April, 1920, by this method with recovery of the mother. The present case was treated in April, 1919, by transfusion as an adjunct to the supportive and eliminative means usually employed. It now seems that blood transfusion has a basis of scientific fact to recommend it in eclampsia and perhaps in the treatment of other toxemias of pregnancy.

Granting that placental extract is toxic when injected intravenously in animals we have, as yet, insufficient evidence to say that the placenta *in situ* is the source of the toxins which are thought to cause eclampsia and kindred conditions. However, we are justified, it would seem, in using blood transfusion in these cases since it offers hope of a lowered mortality and is eminently safe if properly carried out.

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THE PHYSICIAN
SOME NEWER TENDENCIES IN
PREVENTIVE MEDICINE*

By
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Medical research in recent decades has given a distinctive bent to preventive medicine. The discovery of bacteriological causes of disease naturally and properly turned the eyes of public health agencies toward the infecting organisms and measures to prevent their dissemination. It has been a wonderful chapter in the history of the public health movement. What follows is not to be taken as a criticism of the progress made in the realm of sanitary science. Let the legitimate propaganda go on multiplying their beneficent influence. The exhortation offered is that we should not allow the brilliancy of the work accomplished in the field of infections to blind us to the urgent call of other public health work, separate and distinct from contagious and infectious diseases. In our enthusiasm and diligence in searching for specific causes in the test-tube or under the microscope, we have perhaps been too much inclined to forget the individual as a whole—the living, growing, reacting organism with complex phenomena which make up the warp and woof of life, in health and disease. Let us remember that the biggest problem in public health is now, and always will be, how to make the strongest possible individual, capable of fighting his own battles against disease-invasion—this rather than keeping him from coming in contact with the contaminating agency, important as this may be.

Advancement in education constitutes the chief boast of modern civilization. But if one applies the principles of scientific analysis to the methods in vogue, it does not take long to reveal gross faults which work both harm and injustice to many seeking the benefits of education.

Public schools and colleges are like so many mills into which children and young adults of all classes and capacities are dumped, with the expectation that they will be ground into uniform, superior mental and moral flour. The commercial miller would not be so foolish as to mix wheat, rye and corn, expecting thus to get a superior product acceptable to a critical public. Wisely he would separate the grain, give each a different treatment, and thus produce a fine marketable product. Not so in education. All must go into the same hopper, be ground between the upper and nether millstones of long usage, trusting to the sieve of routine examinations to strain out the unworkable materials, which are cast aside as refuse—

weaklings, incompetents, failures, delinquents; in their life-work inefficient, discouraged, in the end oftentimes becoming a community burden.

A few years ago the manufacture and refinement of petroleum was a thing unto itself. What remained or arose in the course of the process was considered sheer waste which was cast aside. The application of scientific study and economic conservation has proved that the by-products of petroleum are of greater value than the oil itself. At the present time a similar waste is going on in the by-products of our present system of education—the supposed failures, delinquents and the like who are threatening to become public or private charges, but by proper direction at the right time and in the right way, may be conserved as useful citizens.

The observations here made are prompted in good part by the remarkable work of H. H. Goddard, director of the Bureau of Juvenile Research in Ohio. As he sets forth it is possible by means of the Binet and kindred tests to determine the mental level of the individual, his adaptability and intelligence in handling knowledge. Primarily the test was employed in the recognition of feeble-mindedness; also in the mental evaluation of delinquents and criminals.

During the world-war the plan was applied to the U. S. Army for the determination of those suited for over-seas service. By this means classification was possible according to capacity and adaptability. In the great conflict it was universally recognized that American soldiers were noteworthy for their ability to act promptly, with fine initiative and intelligence, when emergencies arose. The men had confidence in themselves which insured the dash and success which amazed the world. If the working out of mental levels has thus been demonstrated by army experience to be so practically valuable, does it not offer the strongest argument for applying similar tests and principles in our educational regime? Is it not far better that one should learn his true mental plane where his capacities will count, than that he should be forced to higher levels to which he is not adapted and from which he will fall into the depths of failure, and discouragement? The highest function of education is not to force upon one from without unassimilable knowledge, but rather to work from within out, enabling the child or youth to find himself. Show him his own powers and limitations and fire him with zeal for the accomplishment of those things which he can and ought to do.

Educational workers the country over are awakening to the need of applying intelligence tests in the classification of pupils and students. Columbia University makes such a requirement of those entering the freshman class. In the

*Eighteenth of a series of articles by Dr. Wynn which appear regularly in THE JOURNAL.

State of Indiana a very noteworthy and exhaustive research has recently been completed by Wm. F. Book, head of the Department of Psychology in Indiana University, in collaboration with Oscar H. Williams, of the State Department of Education. I have been privileged to examine the proof of this remarkable, forthcoming volume. To 5,748 seniors in high schools, modified Binet tests were applied. Among the many interesting things revealed was the fact that 25 percent of the superior high school seniors had no intention of taking a college course, whilst from 65 to 70 percent of mediocre students had made definite plans to attend college. This would appear to indicate that the schools as at present conducted are not conserving their best intellectual material for future advancement and use to the State.

Estabrook reports that in an orphans' home of Indiana, in which the Stanford Revision of the Binet test was used on 140 children, 53 were of average mentality, 37 retarded, 12 probably mentally defective, and 38 definitely feeble minded. The latter illustration shows how grossly unjust the present system is in expecting this large proportion of sub-normals to measure up to the average standards in school work.

The writer has given these commendable examples of work in progress in the field of education, to show wherein it seems to me the trend is at fault. Goddard and Book, who may be characterized as distinguished pioneers in this field of practical research, are rendering inestimable service to the cause of education as well as to the sociological status of the community. Both argue with convincing power that this movement is one of vital and practical interest to democracy—giving to the child or young adult his rights for the development of the best there is in him.

If the writer seems presumptuous in criticizing the methods pursued, it is not on the basis of experience as a pedagogue but on the ground of observation as a physician. Medical practitioners have an opportunity clinically to observe the mal-adjustment of children and youths to the work they are expected to do. In the light of this observation it has seemed to me the scope of the work thus far attempted is too narrow. It omits prime essentials if the largest service to the individual is to be achieved and the greatest good to the community attained.

In the main the suggestions offered are not new but as old as history itself. Only a change in method is proposed. I refer to the proper development in the growing individual not only of the mental but of the emotional and moral traits as well. Because organized religion has always maintained control of this field in the

past, offers no justification on the part of scientists ignoring the subject, especially since it is fundamentally a physiological problem.

In discussing the question let it be granted that in man, a fine mentality constitutes one of the crowning ornaments of the human temple. But in this as in all other building, are not the foundation stones all-important—truthfulness, fidelity, courage, aspiration, faith, hope? On top of this foundation must there not be builded the brick of patience, cheerfulness, sacrifice, industry, frugality, friendliness and helpfulness? And how necessary that the whole be bound together by the cement of sound wisdom and poise!

So far as the materials entering into a well-rounded life are concerned, it seems to me the most practical classification for the purposes of education and moral training is to designate those materials as mental, temperamental and moral. By all means let the determination of mental levels so admirably begun go on; but do not wisdom and common sense tell us that it should go hand in hand with temperamental and moral evaluation? There is no valid reason why the latter characteristics of children and youths should not be scientifically worked out by means of tests just as the Binet test has been applied for the evaluation of mental capacity.

In further argument for this contention let me ask what person of collegiate training does not look back with amazement at the subsequent careers of his classmates? There was one who by all mental tests should have attained fame, now fallen by the wayside, held back by temperamental or immoral handicap. Another who was considered almost a dullard has progressed to fine achievement and large usefulness. The call of the age in educational circles is for a three-fold evaluation of children and youths by well devised tests—mental, temperamental and moral. In this way it should be made possible for the individual to find himself—to learn his weaknesses, capabilities and powers, to the end that he may use them for success and contentment. The purpose of education is not so much to feed into the human machine great quantities of knowledge which it can never thresh out, but to properly adapt the material to the mechanism. Equally important is it to make sure that the machine is in order and runs well.

Since this is essentially an educational problem it may be asked what relation has the physician to it? In reply it should be said that to us come the end-products of a faulty educational system—the social and vocational misfits, suffering from all manner of functional diseases—neurasthenia, hysteria, melancholia; failures in the life-struggle resulting in moral delinquency,

pauperism and crime. Medical wisdom looks upon much of this as bad mental and moral drift, which taken before the flood of failure, might have been kept out of the social stream. Here then is a newer and higher type of preventive medicine, in which we should and no doubt will in the years to come play a large part.

In connection with these reforms in educational methods, the physician should at least be advisory; and it is not too much to predict that in the near future, the physician-pedagogue will become a fixture in both the collegiate and public school system. The all-time health officer has already proved the value of his services in the public school system. Whilst as at present

constituted, his function is to spy out infections and physical defects, the future will demand of him a larger and more difficult service. He will become the arbiter of mental, temperamental and moral capacities in children and youths, enabling their proper classification for educational work. Such men will be among the most highly trained educators and will command correspondingly high salaries. Thoroughly grounded in the fundamentals of medicine they will also require special training in public health and mental hygiene, comprehending both normal and pathologic psychology. It will be a field to stir the highest aspirations of the teacher and offer to him the rewards of great achievement in personal helpfulness.

LESLIE'S ON CHIROPRACTIC

There is no information which the public needs more, than that which will reveal the actual character of the claims made by certain medical cults—chiropractic in particular. This information is now forthcoming through a series of articles addressed to the public. Six articles entitled "Is It Chiro-Quack-Tic?" by Severance Johnson are now running in *Leslie's Weekly*, two installments having appeared in the issues for January 7 and January 14. The medical profession has from the beginning recognized the ridiculously unscientific character of the claims made by these cultists and has repeatedly shown that chiropractors are working directly against public welfare; that they attempt—and with some success—to break down medical practice laws, and frequently and openly violate these laws, aided and abetted in doing so by the so-called colleges that are grinding them out. But the public also has large financial interests at stake. Public funds are now being appropriated to help educate competent medical men. To conduct a medical school today costs several times what the institution receives from students' fees, and this deficit is being offset either by state appropriations or private endowments. The expense is being further added to by a gradually increasing provision for scholarships for deserving students who are unable to pay tuition fees. Are the benefits of these expenditures to be lost or dissipated through the spread of chiropractic? Because of the great expense involved in training competent physicians, medical schools conducted for profit have practically disappeared. But the place of the old, low grade, commercially conducted medical school is now being taken by chiropractic

schools. Within a score of years, by charging maximum fees for a minimum of education, a long-haired but shrewd advertiser has amassed millions through conducting a chiropractic "college". A comparison of the brevity of the "professional" course and the common school education required for admission, with the ten or eleven years of high school, collegiate and professional instruction required to develop a competent practitioner of scientific medicine should at once show the inadequacy of the training obtained by chiropractors. The manner in which chiropractors disclaim the need of diagnosis and flout the fundamental sciences of chemistry and bacteriology should reveal to any intelligent layman the utter unreliability of chiropractic as a system of healing. It is high time that the public became fully informed in regard to the workings of this organized system of quackery, and *Leslie's Weekly* is rendering the public a great service by publishing the information.—*Journal of the A. M. A.*, Jan. 14, 1922.

TREATMENT OF INFANTILE PARALYSIS AS BASED ON PHYSIOLOGIC INDICATIONS

In order to restore function in a muscle, Henry O. Feiss, Cleveland (*Journal A. M. A.*, Jan. 14, 1922), has tried to apply function that is as consistent with the normal conditions of life as possible. This means not massage and electricity, which are only local in their effects, but the striving to obtain function through physiologic agencies. To be considered are voluntary effort, subconscious and reflex (induced) movements. It is not only important that these be applied as soon as possible, but also that they be applied strenuously and continuously.

**THE JOURNAL
OF THE
INDIANA STATE MEDICAL ASSOCIATION**

Devoted to the Interests of the Medical Profession of Indiana

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Office of Publication, 406 W. Berry St., Ft. Wayne, Ind.

JANUARY 15, 1922

EDITORIALS

SOCIALIZED MEDICINE

It is evident that a very large proportion of the medical men in this country are not interesting themselves sufficiently in opposing the various plans, put forth by erstwhile leaders in our profession, which ultimately will lead to socialized medicine. The subject is a vital one, and has to do with the very life of the medical profession as a profession, aside from being of the utmost importance to the welfare of the people at large.

Perhaps it was to be expected that in this day and age, when there is so much social unrest among all classes of people, largely due to a misconception of existing conditions and the causes, that there also should be a little unrest in the medical profession. However, there always have been and always will be reformers, and men with visionary but impractical ideas, though at the present moment we are afflicted by too many of that kind, and it so happens that most of them are men occupying more or less prominent positions in the professional world. In fact, most of the Utopian but impractical schemes which work to the detriment of the medical profession and indirectly are harmful to the public, have not originated in the minds of laymen but are advocated and sponsored by prominent medical men who, if entirely honest in their convictions, have not analyzed the subject sufficiently, or, and this is more often the case, have personal ambitions to satisfy.

Some very good men see only the Utopian side of the question and are led to support modified forms of State medicine without realizing what it means and where it will end. No one objects to that feature of State medicine which has to do with public health work as carried on at the present time, even though we confidently believe that the work could be done better as a private enterprise not subjected to political jugglery. What should be objected to is any scheme, under whatever guise, that leads to the furnishing of all medical and surgical advice and service by Federal, State or municipal employees, which in its ultimate end will result

in bureaucratic medicine with all of its vicious effects and in making the people wards of the State.

As an evidence of the trend of our leaders, we call particular attention to the attitude of the University of Michigan, which through its president, as reported in the daily press and in the *Illinois Medical Journal*, openly served notice to the medical profession that the University of Michigan virtually intended to take charge of or superintend the practice of medicine in Michigan. Following on the heels of this announcement, Dr. Hugh Cabot, dean of the Medical Department of the University, proposed a scheme for the establishment of what he calls "community clinics" in many sections of Michigan, to be conducted by and under the control of the Medical and Surgical Staff of the University of Michigan, a select few of the medical men of Michigan in the various communities served to be the nominal representatives of the University in the conduct of these clinics. As pointed out in THE JOURNAL, November, 1921, this starts out by creating caste in the medical profession, known to the public as such, which is bound to cause dissensions, but it also paves the way for the operation of a more comprehensive plan directly under the control of the State with all of the attending vicious results which inevitably would follow. In the end the medical profession loses out, private practice is largely if not wholly abolished, and we have bureaucratic medicine with all its ills! Those who are sponsors for the development of such a condition of affairs fail to appreciate the fact that when we get bureaucratic medicine there will not be any such thing as preference because of competency or integrity. It is a question of politics and pull, first, last and all the time. The man of ability, experience and initiative will be ruthlessly sacrificed on the altar of expediency. As a final act to the drama the poor suffering public pays the penalty by receiving poor service, impersonal attention if not studied indifference, so common to all public officials, and the people are reduced to mere wards of the State. We want none of it, but we will have it unless some of the leaders in the medical profession quit their everlasting advocacy of wild and impracticable schemes such as proposed by Dr. Hugh Cabot and his like.

UNETHICAL MEDICAL ADVERTISING

A newspaper clipping bureau furnishes THE JOURNAL with clippings or abstracts of personal news notes and articles of a medical nature from practically every newspaper in Indiana. Very naturally we are amused and at times provoked to note the frequency with which some Indiana medical men, a few of them prominent

and a limited number being officers of medical societies, permit their names to appear in the daily papers, often in repetition, concerning cases in which more or less so-called wonderful cures have been accomplished. In practically every instance the "write-up" gives indication of either having been written or inspired by the doctor whose name is mentioned. Lately THE JOURNAL office has been flooded with newspaper clippings and even letters calling attention to the most flagrant abuse of ethics by certain members of our Association who seemingly court newspaper advertising and notoriety.

It is conceivable that occasionally a doctor's name may appear in print in connection with a news note concerning some patient who has been given attention and the publicity occurs without the knowledge or consent of the doctor connected with the case, but such instances are rare and such newspaper articles do not contain accounts of rare operations told in technical terms nor refer to wonderful or miraculous cures. Furthermore, the average newspaper does not publish these glowing tributes without knowing that they will be acceptable. In fact newspapers are quite willing to conform to the wishes of the medical profession that advertising of such character be eliminated.

The fact of the matter is that this unethical newspaper advertising and cheap notoriety, if not sought, is sanctioned by some Indiana doctors, and it is time that our local medical societies call for an accounting. We fully realize that the rules of medical ethics are broken often by many of our medical men, and when we attempt the "cleaning up" process we ought to touch many subjects, but we might begin on newspaper advertising which is the most flagrant abuse of all at the present time. We again suggest, as we have suggested once before, that county medical society secretaries keep a scrap book and paste in it all of the newspaper clippings concerning members which appear to be an abuse of medical ethics, and ask the offending members for an explanation. If any guilty doctor refuses to explain or to show that he has been the victim of the kind of publicity of which we complain, without his knowledge or consent, then it is time to ask for his resignation from any reputable medical society and list him among the quacks where he belongs.

PROMISCUOUS ADOPTION OF MEDICAL INNOVATIONS

That the medical profession as a unit should be opposed to all schemes and proposals based on theory alone is expressed in an article by Edward H. Ochsner, of Chicago, and abstracted from the *Ohio State Medical Journal*. It is his

belief that physicians should look with disfavor on all propositions:

1. Which are not absolutely necessary.
2. Which introduce new evils.
3. Which advertise a few at the expense of the many.
4. Which appropriate without fair remuneration the skill, knowledge and time of the physician.
5. Which are palliative instead of preventative or curative.
6. Which further place medical men under lay supervision.
7. Which unduly interfere with the individualism of the medical man or are paternalistic.
8. Which have a tendency to pauperize the public and thus destroy the self-respect and self-reliance of the people.

In the following paragraphs Dr. Ochsner briefly considers each one of the above eight tests:

"1. I believe that the medical profession of America renders better service to its fellow men than does any other group of citizens. I believe that the average American citizen has better medical care than the average citizen of any other country on the globe. If these two statements are true, what is the need of any of these new fangled schemes? Of course, we must have progress, but—

"2. Let us be very careful in adopting new schemes to see that they do not introduce new evils—evils which may be greater than those we are trying to correct. It is about time that we physicians look where we are stepping. Make sure first that we are going in the right direction before we adopt any scheme. Then if it proves good, adopt it, but let us not keep a-moving just for the sake of moving.

"3. Let us analyze the real fundamental reasons for the establishing of free clinics and dispensaries in Chicago as elsewhere. You will find four reasons —two are legitimate and two are not. The legitimate ones are to provide proper medical care for the sick poor, and to provide teaching material for medical students. The illegitimate ones are for the purpose of advertising a certain doctor or group of doctors, or to act as a feeder for a certain hospital. When we adopt new schemes let us be careful that they are for the benefit of the rank and file of the profession and the people and not for the aggrandizement of a few.

"4. We should also oppose every scheme which appropriates the time, skill and knowledge of physicians without just, fair and reasonable remuneration. Why? Because anything which continuously works to the disadvantage of the medical profession will in the end work to the harm of all the people of this country. Next to stability of government, honesty of administration and general intelligence of the people, the welfare of a nation depends more upon the quality of medical service which is rendered to its citizens than upon any one other thing. The longevity, health, efficiency and happiness of a people depend more upon the integrity, ability and industry of its medical profession than upon anything else. If these two postulates are true, and I think they are, then anything which hinders medical progress and which will have a tendency to prevent suitable young men from entering the profession is imminent to the best interests of the whole nation.

"5. We should oppose every scheme which is a palliative instead of a preventative or curative. It is an axiom in medicine and surgery and should be in political economy that a palliative must not be used continuously for any considerable period of time unless the case is hopeless. These people who want to reform everyone except themselves are continually

advocating the continuous use of palliatives and this is a serious economic mistake. We physicians have learned better. We use morphine only to bridge over a period of short stress or to alleviate a hopeless condition.

"6. We should oppose any scheme which has a tendency to further place medical men under lay political supervision and control. Medical men are being more and more dominated by laymen. This is a bad thing for the medical profession and a very serious obstacle to medical progress. Our hospitals are being more and more dominated by lay boards; our medical colleges are virtually completely under the control of laymen. Quite a number of our medical schools have deans who are not medical men, who cannot practice medicine in the state in which they are deans because they are not medical graduates. Another group of our medical deans while they are graduates from medical schools are unfit to practice medicine because they have had no practical experience in the practice of medicine. A very large group of our medical teachers are not medical men and while the old system of ownership of medical colleges by physicians had many objections, the new system has many objections which are even more serious. Our national, state and county institutions with their thousands of patients are controlled by lay boards. In Europe where Compulsory Health Insurance has been in force, this control is so menacing that medical progress has practically ceased. Frederick L. Hoffman is reported as having found a very amusing incident in his recent investigation of the workings of the Compulsory Health Insurance act in England. An English panel doctor prescribed fifteen capsules for a patient but the patient got well when he had taken nine. This physician was called before the lay board, censured and fined because the lay board claimed that he should have known that the patient needed only nine capsules for his recovery. How would you gentlemen like some lay board appointed by Hinky Dink, Bathhouse John, or John the Pow, or some other group of equally powerful politicians in this city, any one of whom has more political influence than all of you combined, to tell you just what you may and may not do in the practice of medicine?

"7. It is time, gentlemen, that the medical profession wake up. I am not a pessimist but the medical profession is today facing the most serious crisis that it has ever faced in the history of American medicine. Most of these schemes interfere with the individualism of the medical man. There can be no medical progress without individualism and without individual liberty. In political economy I believe in voluntary cooperative individualism, in other words *democracy* as opposed to *socialism and autocracy*. I am opposed to each and every one of the fifty-seven varieties of socialism because it interferes too much with individualism and dampens personal enthusiasm and incentive. I am opposed to autocracy for much the same reason.

"8. We should oppose any scheme which has a tendency to pauperize the public or which robs the people of their self-respect and self-reliance. Practically every eleemosynary institution is evidence of some fault in our economic system. It may be necessary now but our supreme effort should be to make all such institutions superfluous. We must have certain charitable institutions today but outside of charitable institutions for mental, moral, and physical defectives who are unable to provide for themselves, the time should come and must come and will come, if we progress in civilization, when there will be no other charitable institutions because charitable institutions, no matter how carefully managed, have a

tendency to take from independence its proper pride and from mendicancy its salutary shame. Shakespeare said very well, as he always said very well: "Who steals my purse steals trash; 'tis something, nothing;

'Twas mine, 'tis his, and has been slave to thousands; But he that filches from me my good name Robs me of that which not enriches him And makes me poor indeed.'

"If Shakespeare had lived in this present day with all the innumerable welfare schemes in operation and contemplation he would have added in very much better English than I can command the following thought: 'And he who deliberately robs any man of his self-respect and self-reliance is infinitely worse than even the thief or the blackguard. He is an enemy to society and a menace to free institutions.' Free institutions depend upon self-respecting citizenship and many of these welfare schemes rob men and women of their self-respect and self-reliance.

"The activities of medical men, as medical men, can be classified into three functions: First, sanitation and public hygiene; second, the teaching of personal hygiene, and finally, the treating of disease. The first is distinctly the function of the state and the last is distinctly the function of the private practitioners of medicine."

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service. It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

COUNTY Medical Society Secretaries are asked to notify us of any alterations or corrections that should be made in the county Medical Society Directory on advertising page six of this number of THE JOURNAL. Unless this directory is correct, it is of no service, but it can only be correct through the assistance of the secretaries who heretofore have given us very little help.

THE zoologists of the United States Department of Agriculture have discovered that carbon tetrachloride is very effective as a destroyer and dispeller of intestinal worms in humans as well as animals. It is very effective in treating round worms, but quite recently it has been found effective in animals infested with hook worms and gives promise of also being effective in the treatment of hook worm in the human.

THE series of articles entitled "The Physician", by Dr. Frank B. Wynn of Indianapolis, which has been running in THE JOURNAL for over a year, probably will be completed with the February or March number. At the earnest solicitations of many who have read the articles, Dr. Wynn will publish his contributions in book form. The edition will be limited and we suggest that those who would like to have the book ought to place their orders with Dr. Wynn at an early date.

AT the Philadelphia session of the American College of Surgeons the medical anesthetists came in for a scoring at the hands of Dr. Charles H. Mayo when he indicated that some of the legislative acts sponsored by the medical anesthetists have not been in the interests of public health but to the advantage of the anesthetists. We are quite in sympathy with the idea of obtaining more trained anesthetists, but we are not in favor of legislation that is so drastic that it places the anesthetic responsibility entirely in the hands of those who are considered expert.

AT the annual meeting of the Indiana Chiropractors' Association held at Evansville in November, plans to raise the standard of the profession (?) were discussed, and a law creating a State Board of Chiropractic Examiners without any expense to the State was advocated. We fail to understand why it is necessary to go to such trouble. The chiropractors are practicing without let or hindrance at the present time, and what more do they want? A law will not help them any. Indiana should wipe out all restrictive laws pertaining to any feature of the healing art. If we can't enforce what laws we now have, why have more?

LESLIE'S WEEKLY has begun a series of articles on what is called in the title "Chiro-quackt". The articles are written by Severence Johnson, and it is claimed that his articles are based upon a neutral, comprehensive and painstaking inquiry concerning chiropractic, the new method of drugless healing. Inasmuch as the followers of chiropractic, now claimed to be over a million in number, have announced that they are determined to exterminate the regular medical profession, perhaps the series of articles by *Leslie's Weekly* will serve a purpose in acquainting the thinking public with the facts concerning this new species of quackery which is threatening the lives and health of the people and is such an arrogant piece of quackery as to merit the attention of the public. Perhaps there are other periodicals placing truth above financial gain that will be willing to discuss chiro-quackt.

INDIANA has many hospitals. A very limited number are approved. There must be something radically wrong with the rest, and they ought to brace up on their qualifications. Is it ethics, quality of work done, or lack of equipment and facilities? Whatever the cause, we are sorry that more are not up to the standard. According to the honor role of hospitals published by the American College of Surgeons, Indiana is represented as follows:

Indianapolis City Hospital, Indianapolis.
Methodist Episcopal Hospital, Indianapolis.
Robert W. Long Hospital, Indianapolis.
St. Anthony's Hospital, Terre Haute.
St. Elizabeth's Hospital, LaFayette.
St. Joseph's Hospital, Fort Wayne.
St. Margaret's Hospital, Hammond.
St. Mary's Hospital, Evansville.
St. Mary's Mercy Hospital, Gary.
St. Vincent's Hospital, Indianapolis.

SOME doctors take particular pleasure in being nastily independent. They think it is smart to take no suggestions or advice from anyone, and when they are asked to lend a hand in promoting something of direct interest to the medical profession as a whole they find delight in offering opposition openly, or silently through failure to cooperate. Is it any wonder that we do not accomplish more when it is so difficult to get the public or legislators to think along right lines in the consideration of medico-public questions? How often do we hear the statement, "You doctors never hang together"? It is true! Let us turn over a new leaf and show the public that we are a unit for the things that are right and for the best interests of all concerned. If we do this we will have more and better legislation for the maintenance of right medical standards, and we will head off the idiotic socialistic schemes which eventually will end in bureaucratic medicine.

IT may seem presumptuous, or perhaps unnecessary, for us to call the attention of our readers to the advertising pages, but there are some members of our Association who do not seem to appreciate fully the effort we are making to protect their interests by keeping them posted concerning trustworthy firms and trustworthy products. Every month we publish a list of the pharmaceutical preparations that have been approved by the Council on Pharmacy and Chemistry of the A. M. A., and we also call attention to some preparations of either questionable character or perhaps determined as frauds. Our advertising pages contain no announcements concerning preparations that are not thoroughly trustworthy. We invite patronage of the advertisers not alone because the advertisers are worthy of patronage but because

the advertising and the income it brings enables us to print a larger and better Journal.

WELL, Well! Michigan is waking up! The January number of the *Journal of the Michigan State Medical Society* publishes the Cabot controversy and editorials that appeared in our Journal and, in addition, a number of editorials and editorial notes of their own touching upon the efforts of erstwhile medical leaders to socialize medicine. With New York, Ohio, Illinois, Indiana, and now Michigan rising up in opposition to some of the schemes of the up-lifters which, if carried to fruition, would destroy private medical practice, it may be that other states will see the light and join in the effort to not only protect but save the rank and file of the medical profession. As one thoughtful and analytical medical man has stated, "The average doctor has his face to the sun and does not see the overwhelming storm coming from behind and threatening to destroy him." We hope he will wake up before it is too late!

A YEAR ago we had occasion to call attention to the fact that some of the A. M. A. officers reserve all of the available rooms at the leading hotels in the city where the annual session of the A. M. A. is to be held, and then parcel out the rooms to their personal friends. As a matter of fact, this is a species of discrimination and unfairness that should be prohibited at future sessions of the A. M. A. The rule "first come, first served" should prevail, and while the A. M. A. officers may succeed in getting the cream of the hotel reservations, they could not prevent others from having at least a fair show of getting the accommodations desired. We appreciate the fact that there are other hotels in St. Louis where if one "stands in" with the Chairman of the Hotel Committee, reservations for the St. Louis session may be made, but it is the principle of the thing which arouses our ire. The A. M. A. is a large democratic organization, and it is not supposed to be run in the interest of a few.

CHIROPRACTORS of California are making a hard fight for recognition in that state. Last November they succeeded in filing initiative petitions qualifying to place on the 1922 ballot a measure to be known as the Chiropractic Examiners' Act which would create a state board of chiropractic examiners to license chiropractors. Signatures to this petition were secured largely by women and girls, hired especially for the work, standing on street corners and in front of public buildings, petitioning all passers-by, who, in accordance with the usual gullibility, were willing to sign anything which did not entail the spending of any money, without even

making inquiry concerning the nature of the petition they were asked to sign. A similar measure was defeated at the last session of the California legislature, and since that time a number of prosecutions of chiropractors practicing without license have been made. It is imperative for the medical profession of California to acquaint their lawmakers with the true facts concerning chiropractic and its fraudulent claims.

THE Board of Trustees of the A. M. A. has up for discussion at the present time the question of the best methods to be employed to educate the public regarding medical matters. Within the next six months a thorough survey of the whole question will be undertaken in such a way as to bring to light all the facts. In connection with this matter the subject of State Medicine will be considered. One of the trustees has publicly stated that there are evils lurking in certain partially organized plans, particularly the diagnostic clinic, and the latter will come in for a thorough survey in order to determine whether diagnostic clinics are conducted for private gain or for the public good. The health center schemes, tuberculosis clinics, venereal clinics, and Red Cross undertakings will be included in this survey. That the survey will be exhaustive and the conclusions dependable is guaranteed by the character of the investigators. Let us hope that it will result in the recommendation of a constructive program that if carried out will safeguard the interest of the medical profession individually and collectively, while at the same time it insures the greatest good for the people served by the medical profession.

MANY prominent clinicians and especially a few well known syphilologists always have considered inunction as the most efficient method of giving mercury. The inunctions are not used by many because (1) they are dirty and disagreeable; (2) they are liable to lead to discovery; (3) and when the preparation remains on the skin for such a length of time it is more liable to set up a folliculitis. In an article entitled "The Clean Inunction Treatment of Syphilis with Mercury", from the department of dermatology and syphilography of the Cleveland City Hospital and from the Western Reserve School of Medicine, published in the *Journal of the A. M. A.*, December 24, 1921, the point is made that these objections may be overcome by cleansing the skin and removing the superfluous mercurial ointment after a thirty minute rubbing. From one to two drams of the mercurial ointment is rubbed into the skin every night, and a different place selected each night in order to avoid dermatitis. All superfluous ointment remaining on the skin may be

cleaned off immediately after the inunction without lessening the mercurial effect. The authors think this is a distinct advance in the therapy of syphilis.

WHILE much has been done to prevent cancer and other malignant tumors, the death rate is steadily increasing, as evidenced by the statistics recently issued by the government Census Bureau. The statistics seem to show that the white and colored races are equally susceptible to cancer, but both races seem less susceptible in the South than in the North. There were approximately five thousand more deaths in 1920 than in 1919 and eight thousand more than in 1918. The statistics seem to indicate the necessity for more wide-spread knowledge concerning the cancer problem, including the necessity for early skilled attention to any suspicious growth. Another interesting feature of the late federal census report is the announcement that the trend of the tuberculosis death rate is downward, the total number of deaths for 1920 being ten thousand less than for 1919, and twenty-two thousand less than for 1918. Unquestionably this lower death rate is due to the effects of a persistent propaganda to acquaint the public with the cause and treatment of the disease. Inasmuch as the total deaths from cancer are approximately seventy-three thousand, against one hundred thousand for tuberculosis, the need for dissemination of knowledge concerning cancer is now as great as for tuberculosis.

At the conference of State Medical Society Secretaries held in Chicago during the month of November, Dr. Frank Billings, of Chicago, made some pertinent remarks concerning the necessity of considering the general practitioner and how to improve his status and his knowledge when discussing medical uplift schemes. Touching upon the economic side of the subject Dr. Billings said: "When you say it is not worth while to study medicine because of the economic conditions of today, it simply means that there are not enough young men today who possess the moral stamina. If a young man is qualified, if he is honest, if he is animated by a desire to give service, and will practice medicine, regardless of what he may get out of it in a financial way, he cannot keep patients away from him. We fear social medicine, and the tendency since the war has been for national organizations and for the government to favor paternal medicine, but it will never succeed. In the poorest hospitals in this country the average patient gets better treatment than the discharged soldiers have had. You may talk of any health

work you please, but any scheme centralized in the federal government or centralized in the state will fail, for it is axiomatic that any work of value for the welfare of the people must be done by themselves and paid for by themselves."

WHAT can be accomplished in the way of developing a wide-awake and progressive medical society is demonstrated by the standing and work of the Muncie Academy of Medicine. A few energetic and enterprising medical men in Muncie decided that it was possible to instill new life into their medical organization, and at once began a campaign by preparing scientific programs that no doctor within a radius of fifty miles could afford to miss. Outside talent was invited, and prominent medical men from various sections of Indiana as well as from other states have contributed to the programs. The interest in the meetings has grown until the attendance probably ranks with the attendance at any of the medical meetings in the state, not excepting those of the Indianapolis Medical Society where the number of members ought to count for large meetings even in dull times. What has been accomplished at Muncie can be accomplished to a greater or less extent in every county in the state. All that is required is a little push and enterprise on the part of a few men, especially a wide-awake secretary, coupled with that spirit of unselfishness and optimism which banishes professional jealousies and the too oft encountered habit of so many doctors to shirk responsibility or, to use a slang phrase, "let George do it." Muncie is on the map medically, and it speaks well for this year's session of the State Medical Association which will be held in that city. Of far greater import is the scientific and social work being done for the benefit of the medical profession of Muncie itself. The example is worth following by other local medical societies in the state. In fact what has been accomplished in Muncie should shame some of the larger cities where little evidence of enthusiasm exists.

PERHAPS a compromise concerning the training required for nurses will settle our nursing problems in a fairly satisfactory manner. The suggestion made at the meeting on Hospital Standardization at Philadelphia is worth considering and it is that a two years' course should be made the minimum standard of nurses' training, but that provision be made for postgraduate work, with a special diploma for advanced training. At present nurses are compelled to study and labor diligently for three years after having achieved a high standard of general education. They are over-trained for nurses and under-trained for physicians. The foundational

requirements are too high for the average demand. On the other hand, in all fairness, provision should be made for the specialized nurses who assume added responsibility in positions such as technical assistants, or where there is opportunity for securing personal distinction. There is no need of lowering the standard of the nursing profession, but there is an urgent need of a provision for a very large number of nurses of the practical type not so technically trained as our present day graduate nurses, but possessing sufficient knowledge of every day nursing to make them of service to hundreds of thousands of patients in moderate circumstances who neither demand nor would accept charity, but are not able to pay the wages of the highly trained nurse of today.

THE tendency toward ultra specialization in medical practice is on the gain if we may judge by not only the increase in the number of specialists but in the lessening number of the good old fashioned general practitioners. Perhaps it is but natural to avoid the unpleasant features of the practice of medicine, and to desire comfort, leisure, regularity of habits for work as well as play, not to be obtained when engaged in general practice, and yet there are many occupations that are less pleasant as well as less desirable than the general practice of medicine. In fact the general practitioner, if he decides to do so, can be about as much of a master of his hours of work as a specialist who confines himself to office practice, and he not only is much healthier for the outdoor exercise entailed in making calls, but the growing recognition of his value on the part of the public insures an increased competence. There was a time when the specialist seemed to reap a harvest in remuneration, but it is a question if that time has not passed, for with the increase of competition, if we may call it such, incomes of many specialists have been dwindling. A recognition of the value of the general practitioner is seen in the attitude of some rural communities that now are advertising for general physicians with a guarantee of more than a living income. In fact the inducements offered by some rural communities in need of general practitioners assure a professional income that is greater than that obtained by many general physicians located in cities where living expenses are greater. Perhaps within the next few years there will be a more wide-spread recognition of the fact that we already have too many specialists and in consequence a tendency to medical astigmatism. When that time comes more medical men will realize that the well educated and well trained general practitioner is the king bee among medical men, and whose services are most sought and most appreciated by the public.

IT is regretted that medical laws in practically all of the States of the Union are trampled under foot in a ruthless manner. No doubt the regular medical profession is responsible for this as a direct consequence of the apathy that exists among doctors as a class when it comes to doing anything for the common good outside of purely professional work. Boards of medical registration and examination have been derelict in duty, but their dereliction has been due to failure on the part of medical men to cooperate in upholding medical laws by vigorously prosecuting all offenders. We would hear little or nothing of pseudo medical cults if the first transgressor had been prosecuted. Medical laws are for the protection of the public and not for the protection of the medical profession, but the public fails to appreciate the fact because those who know the dangers of quackery have failed to impart the information to laymen. At the present time we might as well be without medical laws, for in many of the states, and notably in Indiana, anyone can practice medicine, and to do it doesn't require even a passing acquaintance with a medical college or medical books. Quite recently in one of our Indiana cities a chiropodist operated a deformed foot, resulting in an infection which the chiropodist treated for some time, or until the patient, in disgust, consulted a regular physician. The same chiropodist arranged to operate, under general anesthesia, another patient with a deformed foot, and a dentist had agreed to give the anesthetic notwithstanding the fact that no effort was made to determine the physical condition of the patient who had a heart involvement which would greatly increase the risk even in the hands of an expert anesthetist. Men and women, even young boys and girls, without even an ordinary school education but possessed of a chiropractic diploma secured after a few weeks of indifferent schooling, are practicing upon the sick and disabled. The opticians with no medical training of any kind whatsoever are treating eye diseases, and the next thing we know the plumbers will be doing appendicitis operations. Under such conditions why have medical laws?

IN a letter to the *Journal of the A. M. A.*, December 10, 1921, Dr. Frank Billings of Chicago says some pertinent things concerning group practice, diagnostic and pay clinics. While recognizing that modern clinical medicine embraces such a vast field of knowledge that it is beyond the capacity of any individual to acquire the necessary learning, experience and skill to care efficiently for all patients, yet it is Dr. Billings' opinion that a painstaking general practitioner is able to make a correct diagnosis in a large majority of all patients with

the readily available small laboratory and instrumental equipment, and a thoroughly trained use of proper senses. A specialist may be eminently qualified in his own field of practice but usually he is professionally incompetent outside of it. Today the public suffers because many general practitioners neglect to make the examination and record all of the patient's condition, and in consequence the treatment and management given are slipshod, haphazard and often ineffectual. In fact one of the chief reasons for the growth of the cults is the failure of the general practitioner to give the best that is in him to the service of his patients. *As a matter of fact the application of all the refinements of laboratory and instrumental assistance in making a diagnosis are required in a small percentage of patients*, and just as long as the family physician fails to render the service that he can and should render, there will be a demand for group practice. The trouble with most group practice and diagnostic clinics is that they are conducted selfishly and for questionable purposes in the interest of the individuals forming the staff or the group. There is a distinct need of facilities for diagnosis and treatment by a qualified group of specialists for those patients who suffer from a small group of ailments. However, the sick public that requires this expert service is relatively small. The larger number requires the service of the good, honest and responsible practitioner who will give the best that is in him. If he does this he will not lack for patients or for financial reward.

In concluding his interesting communication Dr. Billings says, "Finally, to judge from known conditions in Chicago, there is a lack of the old fashioned, resourceful family physician in the larger cities. Many private practitioners whose chief practice a few years ago consisted of domiciliary visitation now refuse to give this real obligation to the public and compel their patients who are too ill to visit the office, to go to the hospital. Whatever excuse may be given for this disregard for the comfort, welfare and financial condition of these patients, one is obliged to conclude that it is due really to selfishness and laziness in the desire to escape the hardships experienced by a real family practice; the best and most valuable service a physician may give."

It is evident that the medical profession at large is beginning to appreciate the dangers that threaten in consequence of the attitude of some of the leaders who are advocating or supporting measures that tend to socialize medicine. What we have had to say concerning the Michigan situation seems to have struck a responsive chord in many states, and it is well that a general uprising in the profession for the defense

of inalienable rights and privileges should occur. As indicating the trend of affairs we publish, as requested, a circular being sent out by the medical advisory committee of the Ohio State Medical Association, which reads as follows:

MY DEAR SECRETARY:

As the fate of the Practice of Medicine is at stake, this plea is being sent to every County Medical Society in the United States. Kindly submit it at once to your society for consideration and action.

To Members of the Medical Profession:

The Public and Profession are being sold out to—

- (1) Foundation control of "full time" medical education.
- (2) Lay board domination and the "closed shop" hospital.
- (3) Socialized state medicine, subsidized community health centers, and hospitals under political or university control.
- (4) Legislative dictation of therapy and fees.
- (5) Demoralization of medical standards by the expansion of cults.
- (6) Exploitation of the specialties by lay technicians.

These menacing movements will succeed unless they are combated by a powerful and united opposition. Your so-called leaders are either openly fostering these destructive forces, or more subtly giving them full flight by a camouflaged neutrality.

The American Medical Association belongs to you and you are entitled to have it effectively protect your vital interests. Let your action on this nationwide referendum carry your mandate.

In the present crisis it is up to every County Society to instruct all Delegates to the A. M. A. meeting at St. Louis, Mo., May 22-26, 1922, to vote for—

(A) A change of policy and leadership in the A. M. A. pledged to immediate abolition of the evils mentioned, and constructive protection of medical interests.

(B) The repeal of multiple representation and plural voting privilege by Section Delegates.

(C) The election of Trustees for a period of two years; five Trustees to be elected one year, and four the next, to prevent the Trustees from perpetuating oligarchical rule.

Unless there is a drastic change in the policy and leadership of the A. M. A. the public and profession at large will continue to be misled and misrepresented in the solution of the most pressing problems affecting public welfare and the practice of medicine.

The members of the Scientific Sections are already represented by the Delegates of their respective State Societies, and the voting of Section Delegates is multiple representation, and as such undemocratic and unfair. Unless this plural voting privilege is repealed, the 15 Section Delegates will continue to negative and outvote the Delegates of 15 State Societies having only one Delegate each.

At present three of the nine A. M. A. Trustees are elected each year for a period of three years. There is a proposal before the House of Delegates, introduced at the Boston meeting (1921) to reduce the number of Trustees to seven and have the term of office seven years. Unless the proposed election of Trustees for seven years is nipped in the bud, the A. M. A. will be relegated to "gang rule" for all time to come.

At the Boston meeting of the A. M. A. (1921) those representing the rank and file of the profession lacked only 7 votes of being in control of the House of Delegates, and would have been able to initiate

a policy of public and medical protection, if they had not been outvoted by the Section Delegates. In this connection the following editorial note of warning is of pertinent interest:

* * * "For the benefit of the large number of State Journals that exchange with us, we desire to call attention to the necessity of determining where the Delegates to the A. M. A. stand on many questions of vital interest to the welfare of the medical profession at large. We have had examples of what some of the leaders in the profession would do to us if they have their way. It is time to know something about the attitude of those whom we send to represent us at the great parent organization, which supposedly represents the voice of a very large majority of the medical men in this country. The trouble of it is we sometimes are betrayed, and if necessary, in order to have our wishes respected, our Delegates ought to go instructed."

—(JOURNAL INDIANA STATE MEDICAL ASSOCIATION, November, 1921.)

This warning is all the more necessary since the Board of Trustees, at the Boston meeting (1921), reported that they had under consideration the advisability of the A. M. A. paying the expenses of the A. M. A. delegates. This simply means further subsidizing of the Delegates to control their votes and to thwart the interests of the rank and file. Each State Society that values representation by its own Delegates must take action against this political maneuver.

This is your opportunity of putting your power of attorney into the keeping of only such Delegates to the St. Louis meeting who will openly avow their stand on all vital matters, who will fight your battles and to whom your interests will be a sacred trust.

Self-protection is the first law of life. Act now!

Fraternally yours,

MEDICAL ADVISORY COMMITTEE,

(Signed) F. H. McMechan, M.D., Secretary.

DEATHS

R. B. PETRO, M.D., died at Franklin, Indiana, Friday, December 2, at the age of 78 years.

HARRY S. TONER, M.D., formerly practicing physician of Shelbyville, died November 19 at his home in Austin, Texas.

DAVID H. HAROLD, M.D., died November 30, 1921, at the home of his daughter in Westfield. Dr. Harold graduated from the Physio-Medical College of Indiana, Indianapolis, in 1889.

J. W. ARNOLD, M.D., of Columbus, died December 26, 1921, at the age of sixty-nine years. Dr. Arnold graduated from the Central College of Physicians and Surgeons of Indianapolis in 1885.

WILLIAM C. PROUGH, M.D., of Goodland, 46 years of age, died Tuesday, December 6, at the state asylum at Richmond, where he had been taken last May for treatment of a mental disorder.

CHARLES A. MCCLURE, M.D., died at his home in Eminence, December 28, 1921. Dr. McClure graduated from the Medical Department of the University of Nashville in 1899. He was 62 years old.

CHARLES WESLEY GORDON, M.D., died November 21, 1921, at his home in Fort Wayne, at the age of 69 years. Dr. Gordon graduated from the Fort Wayne Medical College in 1877 and from the Rush Medical College of Chicago in 1880.

SAMUEL R. WHITE, M.D., died at his home in Laud, November 28, 1921, at the age of 63 years. Dr. White graduated from the Fort Wayne Medical College in 1886 and was a member of the Whitley County Medical Society, the Indiana State Medical Association and the American Medical Association.

GREENLY V. WOOLLEN, M.D., age 81 years, died December 10 at his home in Indianapolis. Dr. Woollen was born in Marion county June 24, 1840, and graduated from the Bellevue Hospital Medical College in 1865. He was one of the founders of the Indiana State Medical Association, and served as its secretary from 1865 to 1875; served as president of the Indianapolis Medical Society; held the chair of professor of rhinology and laryngology in the old Central College of Physicians and Surgeons, Indianapolis; for several years was superintendent of the City Hospital, and served as physician to that hospital for 25 years. Since retiring from the active practice of medicine 15 years ago Dr. Woollen has been the medical director of the American Central Life Insurance Company. He was a fellow of the American Medical Association.

ALBERT CARL KIMBERLIN, M.D., Indianapolis, died December 14 as the result of a shooting accident while on a hunting trip. Dr. Kimberlin was born at Fisher's Station, 12 miles north of Indianapolis, January 21, 1863. He graduated from the Indiana Medical College, Indianapolis, in 1888, and served one year's internship at the City Hospital at Indianapolis, later becoming connected with the city dispensary and other Indianapolis hospitals. For several years Dr. Kimberlin has held the chair of Clinical Professor of Medicine in the Indiana University School of Medicine, and has been an active worker in the Indianapolis Medical Society and the Indiana State Medical Association, having served as both secretary and president of his county medical society, and as president of the State Association in 1913-1914. In addition to the above he was a member of the

Indianapolis City Board of Health for several years, member of the House of Delegates of the American Medical Association, and on the clinical staff of both the City and Methodist Hospitals. For a number of years his practice was devoted exclusively to internal medicine, and particularly cardio-vascular diseases, in which subject he was considered an authority throughout the country. The untimely death at the age of 58 years is deeply felt by the medical profession of this state, as he was loved and honored by all who knew him.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

DR. GEORGE R. DANIELS has been elected mayor of Marion.

DR. M. F. HUNN has located in Elkhart, for the practice of medicine.

DR. SCOTT EDWARDS, of Greenfield, has gone to California for his health.

DR. RALPH BRUNER has located at Sellersburg for the practice of medicine.

DR. M. L. CURTNER has been appointed county physician for Knox County.

DR. J. W. MORR, of Albion, has taken up the practice of medicine in that city.

DR. R. R. COBLE has been made superintendent of the City Dispensary of Indianapolis.

MISS JEANETTE NELIGH has been made superintendent of the Marshall County Hospital.

DR. V. G. BLACK, formerly of Fishers, has taken up the practice of medicine in Noblesville.

DR. CLEON NAFE has been made assistant superintendent of the City Hospital at Indianapolis.

MISS LULU SUMMERS has been made superintendent of the Wells County Hospital at Bluffton.

DR. W. P. LAUE has returned to Gary for the practice of medicine after an absence of several months.

DR. CLINTON G. BECKETT, of Attica, was married on Christmas day to Miss Flo Hildebrand, of the same city.

DRS. W. D. GATCH and J. D. GARRETT have resigned from the board of public health and charities of Indianapolis.

DR. MILES F. PORTER, of Fort Wayne, was elected president of the Western Surgical Association at the recent annual meeting.

DR. PHILIP BOWSER has moved to Goshen, where he will take up the practice of medicine in partnership with his uncle, Dr. Irvin J. Becknell.

DR. C. S. WOODS, superintendent of the Methodist Hospital of Indianapolis, left December 10 for Colorado Springs, Colorado, on a leave of absence.

DR. L. M. REAGAN, formerly of Tipton, has located at Kokomo, with offices in the Darby Building, for the practice of medicine and surgery.

DR. S. M. COTTON, of Goldsmith, was elected secretary of Tipton County to take the place of Dr. L. M. Reagan, who has removed to Kokomo.

DRS. H. W. FITZPATRICK, MERLE HOPPENRATH and C. C. COTTON have been made members of the city board of health of Elwood for 1922.

DR. HERMAN G. MORGAN has been reappointed secretary of the city board of health of Indianapolis under the administration of Mayor Shank.

DRS. MAURICE LOHMAN and ERIC CRULL, of Fort Wayne, have returned from the East, where they attended the meeting of the United States Public Health Service.

THE Peru Chamber of Commerce has set aside \$2,000 as the beginning of a fund to be used in the erection of a new building for the Miami County Hospital.

A BUILDING permit has been issued for the erection of a new south wing of St. Anthony's Hospital at Terre Haute. It is estimated that the addition will cost \$75,000.

THE Jackson County Medical Society held a meeting Thursday, December 1, at the home of Dr. Gillespie, Seymour, Indiana. A paper was presented concerning infections from the teeth and gums.

AT the December 13 meeting of the Vigo County Medical Society the following officers were elected: Dr. A. F. Knoefel, president; Dr. C. M. Depuy, vice-president; Dr. A. M. Mitchell, secretary and treasurer.

DR. VIRGIL H. MOON presented the third of his series of lectures on "The Anatomy, Physiology and Pathology of the Blood and Circulatory System" before the Tipton County Medical Society at Tipton, December 5.

THE Cass County Medical Society held its regular meeting December 15 and elected the following officers for 1922: Dr. F. W. Terflinger, president; Dr. W. W. Holmes, vice-president; Dr. G. D. Miller, secretary-treasurer.

THE Adams County Medical Society held a meeting at Decatur, December 9, and elected the following officers for 1922: President, Dr. H. F. Costello; vice-president, Dr. J. S. Boyers; secretary and treasurer, Dr. Clarence P. Hinckman.

ONE hundred forty nurses passed the registration examinations at Indianapolis. There were one hundred forty-nine applicants. Miss Mildred A. Chaffee, of St. Anthony's Hospital, Terre Haute, headed the list with a percentage of 98.

DR. CHARLES A. BARNHILL, of Indianapolis, who makes a specialty of oral surgery, extraction of teeth and x-ray of head and teeth, announces the removal of his offices from the Hume-Mansur Building to 536-540 Bankers Trust Building.

DR. EUGENE L. BULSON, of Fort Wayne, left January 6 for Philadelphia to take a special course in bronchoscopy and esophagoscopy under Dr. Chevalier Jackson. He also will do some special postgraduate work on the eye while in the East.

AT the regular meeting of the Knox County Medical Society, held Tuesday, December 13, the following officers were elected to service in 1922: Dr. Charles S. Bryan, president; Dr. J. W. Trueblood, vice-president; Dr. D. H. Richards, secretary-treasurer.

THE following officers for the Grant County Medical Society have been elected for the coming year: President, Dr. Harry Williamson; vice-president, Dr. F. A. Priest; secretary-treasurer, Dr. B. C. Dale; censors, Drs. V. V. Cameron and M. F. Baldwin.

THE Randolph County Medical Society held a meeting Monday, December 12. A paper was presented by Dr. Reid, and the following officers were elected for the new year: Dr. C. L. Botkin, president; Dr. C. E. Milligan, vice-president; Dr. J. I. Robison, secretary and treasurer.

THE following officers were elected by the Goshen Medical Society at their regular meeting on December 23: President, Dr. L. H. Simmons; vice-president, Dr. H. W. Eby; secretary, Dr. H. E. Vander Bogart; treasurer, Dr. D. L. Miller; librarian, Dr. E. E. Ash; censor, Dr. I. J. Becknell.

THE Noble County Medical Society held a meeting at Albion, December 13, and the following officers were elected: Dr. A. C. Seymour, president; Dr. Lane, vice-president; and Dr. C. E. Munk, secretary and treasurer. A paper was presented on the subject "Pneumonia."

THE Clinton County Medical Society held a meeting at the home of Dr. A. G. Chittick, December 1, and the following officers were elected for 1922: Dr. W. C. Mount of Kirkinlin, president; Dr. J. A. Van Kirk, vice-president, and Dr. L. L. Harding, secretary-treasurer.

THE Wabash County Medical Society held its regular meeting, Thursday, December 15, and elected the following officers for 1922: President, Dr. N. T. Hale; vice-president, Dr. Browne; secretary and treasurer, Dr. Cripe. A paper was presented by Dr. M. F. Jordan on "Salpingitis".

THE Fulton County Medical Society held its annual meeting Friday, December 2, and the following officers were elected to serve during 1922: Dr. B. F. Overmeyer, president; Dr. A. E. Stinson, secretary-treasurer. Drs. King, Brown and Shafer were appointed to act as the program committee.

THE Howard County Medical Society held a meeting December 2, and the following doctors were elected as officers of the society for 1922: Dr. E. N. Bennett, president; Dr. F. S. Cuthbert, vice-president; Dr. W. R. Morrison, secretary-treasurer. A paper was presented by Dr. R. P. Schuler on "Four-Hour Feeding for Infants".

At a meeting of the Indiana State Sanitorium Association, held at the Irene Byron Hospital, Wednesday, December 7, the following officers were chosen to head the Association: Dr. Alfred Henry of Indianapolis, president;

Dr. Gardner Johnson, of Evansville, vice-president; Dr. Eric Crull, of Fort Wayne, secretary-treasurer.

ATTORNEY GENERAL U. S. LESH declares that chiropractors cannot give certificates of physical disability which will excuse children from attending school under the provisions of the compulsory school attendance law. The attorney general declares that chiropractors are not physicians in good standing in this state and therefore chiropractors' certificates are not sufficient.

THE first examination of the National Board of Medical Examiners, under the new plan, will be held as follows: Part I, February 15, 16 and 17, 1922, inclusive; Part II, February 20 and 21, 1922, inclusive. Application blanks and circulars of information may be had by writing to the Secretary, Dr. J. S. Rodman, 1310 Medical Arts Building, Philadelphia, Pa.

DR. JOHN MCCOY, a native of Spencer county, died December 20 in the hospital at the Soldiers' Home, Pasadena, California. Dr. McCoy was born in 1835, graduated in medicine from the Medical Department of the University of Michigan and served as surgeon with the 139th Indiana Infantry in the Civil War. Dr. McCoy had lived in Pasadena for 36 years.

THE Kosciusko County Medical Society met December 27 with a banquet at the Hotel Hays. Reports of the year's work were read, and officers for the ensuing year elected as follows: President, Dr. C. C. DuBois, Warsaw; vice-president, Dr. Paul A. Garber, Sidney; secretary-treasurer, Dr. O. H. Richer, Warsaw; delegate to State Convention, Dr. J. F. Young, Milford.

THE physicians and surgeons of Alexandria held a meeting at the Alexandria Hospital, December 1, and the following staff was elected: President, Dr. A. E. Otto; secretary-treasurer, Dr. H. C. Runyan; directors, Drs. J. E. Hall, J. J. Gibson, C. D. Schurtz, F. G. Keller and Mr. Harry Adams. Mrs. L. F. Schmauss was made managing director and superintendent of the hospital.

THE U. S. Public Health Service has felt it necessary to prevent the too optimistic and extravagant claims recently appearing in the newspapers in regard to the curative effects of chaulmoogra oil derivatives in the treatment of leprosy. While the use of the oil and its derivatives has resulted in a considerable number of apparent cures, it is as yet too soon to tell whether these cures will be permanent.

THE Kokomo Physicians' Telephone Exchange was opened Monday, December 12. The physicians' telephone exchange is a recent idea and is spreading throughout many cities. By this plan the telephone operators of this exchange will know just where every doctor is, whether he can be reached promptly or not and whether it will be advisable to call in another physician, in case of an emergency. The plan is proving very popular.

At the regular meeting of the Delaware-Blackford County Medical Society held December 2, the following officers were elected: Dr. W. C. Moore, president; Dr. H. S. Buckles, vice-president; Dr. C. S. Bock, secretary-treasurer. A paper was presented by Dr. Byrl Kirklin on "Diagnosis of Bone Diseases". Plans were made for the entertainment of the Indiana State Medical Association, which will hold its annual convention at Muncie this year.

DR. W. D. CALVIN, of Fort Wayne, has announced the limiting of his practice to dermatology and genito-urinary diseases. Dr. Calvin formerly taught this subject in the old Fort Wayne Medical College, and was assigned this special work while in military service during the World War. He recently has completed special postgraduate work in Washington University, and is now limiting his practice, with offices at 312 West Wayne Street, Fort Wayne, hours 10 to 4.

THE McIntosh Battery and Optical Company of Chicago, one of the oldest and best-known x-ray, electro-medical and physical therapy apparatus manufacturers in the United States, has been reorganized with an increase of capital stock under the name of the McIntosh Electrical Corporation. Coincidental with this enlargement the Company has established distributing agencies in almost every state in the United States in the hands of local men. Mr. A. W. Zimmerman, of the Zimmerman Supply Company, 1331 Calhoun Street, Fort Wayne, has the agency for Indiana.

AT the annual meeting of the Indianapolis Medical Society, held January 3 at the Indiana Dental College, the following officers were elected for the ensuing year: President, Dr. Lafayette Page; first vice-president, Dr. George S. Row; second vice-president, Dr. Harry K. Langdon; secretary-treasurer, Dr. William A. Doeppers; librarian, Dr. Frank B. Wynn; members of the judicial council, for three-year terms, Dr. Ross Ottinger and Dr. Bernard Erdman; delegates to the State Association, Dr. E. F. Kiser, Dr. A. L. Marshall, Dr. J. A. MacDonald, Dr. C. H. McCaskey, Dr. John Sluss, and Dr. John Carmack.

THE Public Health Institute to be held at Indianapolis, February 13 to 18, inclusive, under the auspices of the U. S. Public Health Service, the Indiana University School of Medicine, and the State Board of Health, promises to be of unusual interest and value to the medical profession of the state. The lectures will be held in the auditorium of the Lincoln Hotel, Washington and Illinois streets, and will begin at 1 p. m., Monday, February 13, and close at 12 M., Saturday, February 18. In addition to the lecture course there will be a series of clinics on tuberculosis, and venereal diseases, an intensive laboratory course, and a Woman's Conference. There will be no fees or charges of any kind whatsoever. Full particulars concerning the program and other details may be secured from Dr. W. F. King, Director of the Institute, care of the State Board of Health, Indianapolis.

DURING December the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: The Abbott Laboratories: Neocinchophen-Abbott. Powers-Weightman-Rossengarten Co.; Mercury and Potassium Iodide; P. W. R. Schimmel & Co.: Oil of Cypress-Schimmel & Co. E. R. Squibb & Sons: Liquid Petrolatum-Squibb; Food Allergens-Squibb; Pollen Protein Allergens-Squibb; Animal Epidermal Extract Allergens-Squibb; Bacterial Allergens-Squibb. Winthrop Chemical Co.: Chaulmestrol. Nonproprietary Article: Chaulmoogra Oil.

CHANGE OF AGENCY: CRESATIN.—The Council has directed that the description of Cresatin (New and Nonofficial Remedies, 1921, p. 94) be revised to show that the name has been changed to Cresatin—Dr. N. Sulzberge, and that it is manufactured by the Intravenous Product Company of America, Inc.

THE GOLD CURE

An unfortunate man, possessed of a comfortable competency, evidenced various eccentricities, and so his loving relatives tenderly escorted him to a famous neurologist. The latter viewed the patient from different points of the compass, and in due course passed him on to a psychopathologist. This polysyllabic expert subjected him to an exhaustive analysis and presently shucked him off onto a psychiatrist. The latter had hardly more than begun his investigation when the patient lost the most of his money. Thereat his kin turned him loose, declaring that they had no more time to waste on a darned old crank. And he fell into the hands of a shabby plug of an unknown general practitioner, who gave him a few doses of bitter stuff and cured him for a dollar and sixty cents.—*Country Gentleman.*

SOCIETY PROCEEDINGS

		COUNCILORS' MEMBERSHIP CONTEST			Per-
District	Councilor	Number of Counties	1921 Membership	1922 Membership to Date	
First—Dr.	Willis.....	7	176	87	.49
Second—Dr.	Schmadel.....	7	149	52	.34
Third—Dr.	Leach.....	9	130	22	.17
Fourth—Dr.	Osterman.....	10	138	66	.47
Fifth—Dr.	Weinstein.....	5	158	75	.47
Sixth—Dr.	Spilman.....	8	150	11	.07
Seventh—Dr.	Earp.....	4	425	11	.02
Eighth—Dr.	Conrad.....	5	172	20	.11
Ninth—Dr.	Moffit.....	10	253	67	.26
Tenth—Dr.	Shanklin.....	5	151	18	.11
Eleventh—Dr.	Black.....	6	191	112	.59
Twelfth—Dr.	Morgan.....	8	211	72	.29
Thirteenth—Dr.	Berteling.....	8	274	30	.10
		92	2608	643	

FORT WAYNE MEDICAL SOCIETY

The annual meeting and dinner of the Fort Wayne Medical Society was held Tuesday evening, December 20, at the Chamber of Commerce, Fort Wayne. Dr. E. M. Van Buskirk, president, presided over the following program: "Present Day Cardiology," Dr. George Hermann, Ann Arbor: "Methodism vs. Medicine" or "Can a Doctor Be a Christian?", Dr. Kent K. Wheelock; "The Medical Mystery," by "Mustapha Ali Ben Haggin". The program was interspersed with music.

The following officers were elected for the coming year: President, Dr. A. L. Schneider; secretary, Dr. Miles F. Porter, Jr. (re-elected); treasurer, Dr. E. E. Morgan (re-elected).

INDIANAPOLIS MEDICAL SOCIETY

Meeting of Dec. 15, 1921

At this Kimberlin memorial meeting addresses touching upon the life and work of Dr. A. C. Kimberlin were presented. Dr. Frank B. Wynn gave the following:

"Upon this occasion I am weighed down not only by grief at the loss of a dear friend but by the consciousness that my words must express the depth of feeling which stirs your hearts. A nobleman from our ranks has been cut down, before his allotted time. The tragedy of his going appalls us and its suddenness reminds us of the uncertainties of life.

"At this time whilst our memories hark back to the intimacy of our mingling with him—his devotion to this Society; his frequent and enlightening participation in its proceedings; his exhaustive and informing articles upon medical subjects; his fine and satisfying grasp of clinical medicine; the wisdom of his counsel, the goodness of his heart, the gentleness of his spirit, the sincerity of his friendship and the greatness of his soul—will all be cherished by us as a precious heritage.

"Resolutions are formal and cold; my words wholly inadequate to express our affection and appreciation of him who was of us, and for us; a leader whom we could follow, safely, confident that he would show the way; a physician who exalted the scientific, the clinical and spiritual ideals of medicine, a man to the core, who sought ever to be his brother's keeper; dutiful in his obligations to the community; true to his own flesh and blood. 'We shall not soon look upon his like again.'

"It were perhaps better at this time not to particularize upon incidents of his life, for where would the narrative end? We would emulate his life and example. This we may do better if, instead of many incidents, we stress two of the outstanding traits of his career. It will be remembered that at the last feast of the Great Physician, there sat amongst the twelve Apostles, Luke the beloved physician. He utters these stately words: 'No man having put his

hand to the plough, and looking back, is fit for the kingdom of God.' And was this not always true of our beloved colleague? Steadfastness (I like the word), unswerving steadfastness characterized his whole life. Even in his country-boyhood life, intelligent, affectionate parents would have had him follow in their footsteps on the farm, but his eyes were fixed upon the practice of medicine—that was the goal for which his heart yearned, and never did he deviate from that resolution. With the same determined enthusiasm he studied medicine in the Indiana Medical College, winning distinction as a thorough student; during his internship at the City Hospital, his diligence and thoroughness in clinical work, won a devoted and life-long friendship with every member of the Staff; or was it as teacher of anatomy, or Professor of Clinical Medicine in the School of Medicine, his thoroughness and eagerness to know the whole truth, gained the confidence and admiration of students.

"He was big enough to recognize and deplore his own shortcomings. It was with him a matter of extreme regret that he had not received a collegiate education. Here again his steadfastness was shown in his struggles to realize higher ideals. For two years after his graduation he took systematic private tutoring in cultural subjects. This training was apparent in his writing and in his discussions of medical papers. The Professor of Medicine in one of the oldest medical colleges in the West once observed to me concerning a discussion Dr. Kimberlin had given in a national meeting, that it was one of the finest he ever heard. His fluency, grasp of the subject, orderly arrangement of his ideas always made his friends feel at ease and proud of his efforts.

"His career as a general practitioner was triumphal, not merely in the matter of business volume, but in the larger sense, that the high quality of professional services which he rendered, merited and received devoted approval. He was an ideal family doctor. Feeling that the stress of his multiplying responsibilities was threatening inroads upon his health he resolved upon devoting his energies to a more limited field, by his studies and writing seeking to justify a claim for ability as a consultant in both the professional and public mind. Here again came into play his ceaseless industry and unwavering steadfastness to medical ideals. Whilst in his work as an internist he brought the tremendous aid of his vast clinical experience, he never allowed this to befog his vision for other diagnostic helps. He was always eager to collaborate. The large consultative practice which he did bore eloquent testimony to his ability, the wisdom of his counsel, and the enlightening and helpful attitude which he always showed toward his confreres. His election to the Presidency of this Society and the State Medical Society, was an expression of the esteem and affection in which he was held by the profession throughout the State.

"An incident occurring the past summer will illustrate his ability and gift to handle himself creditably on public occasions. At a medical banquet of two hundred and fifty the speaker of the evening was one of the most distinguished surgeons of the whole country. Since the meeting was held in a smaller Indiana city he did not prepare for the occasion. Arriving late he looked in upon this fine assemblage of men and exclaimed 'Why, I was not counting upon an occasion like this. I am not prepared.' His audience soon found that his statement was correct, for he rambled most disconnectedly and disappointingly. The presiding officer noting the presence of Dr. Kimberlin in the back of the hall, suggested that it might be appropriate to hear from an internist on the subject which the surgeon had

presented. Dr. Kimberlin never in his life appeared to better advantage. In his clear, fluent, and incisive manner he talked for twenty minutes, commanding the rapt attention of those present. The unanimous opinion of all present was that it had been a great evening, but that the outstanding address had been Kimberlin's.

"In the Book of Books we read 'The grass withereth, the flower fadeth.' And whilst Isaiah thus wrote figuratively of life, in the case of our colleague I should prefer to think of him as a tree. Indeed I should liken him unto the 'Old Oak Tree' under which I played as a country lad—a great white oak towering 200 feet into the air, five feet in diameter, standing there alone, strangely left from its primeval brothers. Like our dear friend who has gone, how steadfast it had been through the two centuries of its existence. It stood as a sentinel to direct travelers for miles around. Benevolence it showed to the hornets' nest which hung from a bough; protection to the chipmunk which hid itself securely under the deep roots; kindness to the trumpet vine which clung about its trunk; refuge to the distracted quail which secluded itself among the leaves; comfort to the harvest laborers who rested in its shade at noontime; inurement it gave in the swing which hung from its great arm; patience it taught me, for had I not seen it at its job my whole life through; courage it taught me, for had I not seen it swayed in the surging blasts of winter. The old tree had taught me all the worth-while attributes of life—that the greatest thing is to live to the full of one's abilities, to love and to serve. Figuratively speaking A. C. Kimberlin was an 'Old Oak Tree'. And like this monster of the primeval forest he came to a tragic end. Lightning claimed the one, tearing it into ten thousand splinters, as did accident fell the other.

"The Creator has claimed them both. They are not dead. It was worth while to have known this man. Let us think on his life."

Dr. W. N. Wishard, who was prevented from attending the meeting, sent a communication which was as follows:

Indianapolis, December 15, 1921.

Officers and Members of the Indianapolis Medical Society, Indianapolis, Ind.
Gentlemen:

I regret very much that a temporary illness will prevent my being with you tonight when you meet to do honor to the memory of one who has done so much for this organization.

I first met Dr. Kimberlin in 1886 when he was attending the old Medical College of Indiana. Our acquaintance was deepened and strengthened by the fact that I was his preceptor during his medical school work.

The characteristics which were so marked in his student days have become more noticeable as the years have passed. I recall very vividly today his appearance and the boyish frankness, kindness and eagerness for work when he first came to the City Hospital to see me during the latter part of my administration as Superintendent. He used to come out to the hospital on his velocipede, one of the wheels of which was very large and the other quite small, but which maintained sufficient speed to enable him to attend to his medical school work and yet spend considerable time at the hospital.

Every member of the medical school faculty and every one in any official or professional capacity at the City Hospital dearly loved "Allee Kimberlin" as he was affectionately called by all. The unusual candor and sincere sympathy and interest in his patients that marked his early career was accompanied by

an eager scientific interest and effort in their behalf. He has always been a student and a wonderfully efficient and industrious one.

I recall his coming to my office one day not long after he had left the hospital and stating that he had been keenly conscious of his general educational deficiencies at the time he entered the medical school. He asked me to suggest a teacher in history and literature, which I was glad to do, and he pursued his private studies in this direction for two or three years, until his practice became large enough to occupy all his time.

He held at the time of his death a very enviable position. To his professional confreres, to his students and to his patients and to the public hospitals of Indianapolis he has been a wise counselor and loyal friend to whom we have all turned with hope and confidence. I know of no one who can quite take his place. We are all richer and better for having known him.

As a consultant in internal medicine the profession of Indiana and adjoining states will feel his loss almost as keenly as we do. I never knew a physician to call him in consultation or meet him for the first time who did not entertain for him an unusual quality of respect and confidence. Most of them felt that he was already an old friend and he became a fast friend of the great majority.

He was tolerant of the opinions of others and yet clear and firm in his own views. I was early impressed with his perfect candor when a medical student, and later as a young practitioner, and in more mature years I have never known him to fail to frankly declare himself a sincere believer in the Christian religion. Neither have I ever known him to criticize the religious views of others.

As a Christian gentleman, an unusually wise and efficient physician, as a personal friend and a rare type of citizen, he stood to those of us who knew him intimately somewhat in a class alone, or at least as one who blended the elements of goodness, gentleness, greatness and love in a rare way.

Personally, I cannot trust myself to speak of what his passing means to me and can only say

"Dear, dear friend, hail and farewell."

DECATUR COUNTY

At a regular meeting of the Decatur County Medical Society, held December 19, 1921, the memorial committee presented the following resolutions concerning the death of Dr. A. C. Kimberlin, of Indianapolis:

Greensburg, Indiana, Dec. 19, 1921.

The memorial committee of the Decatur County Medical Society on the death of Dr. A. C. Kimberlin, presents the following report.

Words fail adequately to express the regret and sorrow felt by the Decatur County Medical Society over the tragic and untimely death of Dr. A. C. Kimberlin.

Dr. Kimberlin was frequently called to Greensburg and vicinity as a consultant and had the respect and confidence of members of this society, as well as the laity. He was ever courteous, kind and sincere, leaving a ray of hope and comfort. Dr. Kimberlin possessed an unusual degree of skill, and was ever willing and ready to use such skill for the relief of suffering humanity. We feel that his place cannot be filled, but we submit to the will of the Great Physician who doeth all things well.

Resolved, that the society extend its heartfelt sympathy to the widow of Dr. Kimberlin and relatives, with a prayer that an all wise Providence comfort, protect and care for them in this their great affliction.

Resolved, that a copy of these resolutions be sent to the widow, The Journal of the Indiana State Medical Association, and that they be spread on the records of our local society.

D. E. DOUGLAS,
I. M. SANDERS,
P. C. BENTLE.

PUBLIC HEALTH INSTITUTE AT INDIANAPOLIS, FEBRUARY 13-18, 1922.

The U. S. Public Health Service, in co-operation with the Indiana State Board of Health and the Indiana University School of Medicine, has arranged for a Public Health Institute to be held in Indianapolis for the entire week, beginning February 13, 1922. This institute is one of a series of such institutes to be held in twenty-four of the larger cities of the United States in order that the advantages of such an institute may be brought within reasonable reach of every section of the country. These institutes will be open to every person who may care to attend, without charge, and will furnish a splendid opportunity for physicians, not only to "brush up" and broaden intellectually, but also to renew and extend acquaintances throughout the state and meet some of the good men from other states. Health officers, nurses, social welfare workers and all others interested will have advantage of a short, intensive course covering the various phases of public health and social welfare work under the leadership of experts in every line.

For the Indianapolis Institute the lecturers and their subjects will be as follows: Dr. Wm. C. White, of Pittsburgh, on "Tuberculosis"; Dr. Rachael S. Yarros, of Chicago, on "The Delinquent"; Dr. Frederick Green, of the American Medical Association, on "Health Education"; Dr. William N. Wishard, of the Indiana University School of Medicine, on "Gonorrhea"; Dr. Frank W. Gregor, of the Indiana University School of Medicine, on "Syphilis"; Miss Jessie Binford, of the Interdepartmental Social Hygiene Board, Washington, on "Protective Social Work"; Dr. A. T. McCormack, State Health Commissioner, of Kentucky, on "Administrative Problems in Public Health"; Dr. Wm. A. Evans, of Chicago Tribune, on "The General Communicable Diseases"; Dr. Charles P. Emerson, Dean of the Indiana University School of Medicine, and Dr. Frank S. Hutchens, Indiana University School of Medicine, on "Mental Hygiene."

In addition to the above there will be lectures on child hygiene, nutrition in health and disease, sanitary engineering, industrial hygiene, etc. Dr. Alfred Henry, of the Indiana University School of Medicine, has arranged a series of tuberculosis clinics, at which the modern methods of examination and early diagnosis will be demonstrated. A series of venereal disease clinics will be given in connection with the Indianapolis Venereal Disease clinic. Dr. Virgil H. Moon, bacteriologist for the Indiana University School of Medicine, and Dr. William Shimer, Superintendent of the Laboratory of the State Board of Health, have arranged an intensive course in serology, bacteriology and microscopy for the benefit of physicians and others interested. In addition to the regular daily program, and program of clinic and laboratory demonstrations, there will be a public meeting each evening. Dr. Evans, Dr. Emerson, Dr. Green, and others will address these public meetings on subjects of general interest to the public.

The meetings of the Institute will be held in the Auditorium of the Lincoln Hotel, which has a seating capacity of 700 with rooms for committee and group meetings and is admirably adapted to the

purposes of the Institute. It is believed that the program of this Institute should appeal to health officers, physicians, social workers, nurses and all others interested in public health and public welfare, not only in the state of Indiana, but in surrounding states as well. The interest already shown indicates a large attendance at the Institute. Dr. W. F. King, Assistant Secretary State Board of Health, is Director of the Institute, and will be pleased to give personal attention to any inquiry concerning the Institute.

MUNCIE ACADEMY OF MEDICINE

At a regular meeting of the Muncie Academy of Medicine the following memorial resolutions concerning the death of Dr. A. C. Kimberlin, of Indianapolis, were adopted:

In the drama of life the physician plays a leading role. From the dawn to the eventide the issues of life are his care and concern. To him is committed the holy rite of lifting the veil on life at birth, and he is there when the curtain falls on the closing scene. His are the first hands to touch the new born and the last to minister to the stricken and dying.

To be highly endowed by nature, well trained, fully equipped and wholly dedicated to such a mission is to be ordained as a coworker with God in the conservation of life and the promotion of human health and happiness. It is at once a mission and a ministry which should inspire the highest motives and the fullest consecration to service. He most truly lives who best loves and serves his fellowman.

Thus lived, thus labored and in high degree attained, did the subject of this memorial, our friend, comrade and coworker, Dr. Albert C. Kimberlin. He, whom we all knew and loved, and whom we mourn tonight, was so much a part of us he seemed to belong to us. For many years his contributions to our medical organizations had been frequent and inspiring. In his personal contact, as in his professional relations, he happily exemplified the high standards and ideals he so ably advanced as teacher and lecturer. Therefore, be it

Resolved by the Muncie Academy of Medicine, in regular meeting assembled, that in this expression of sorrow in the tragic and untimely death of Dr. Kimberlin, we voice a sense of personal loss shared by a vast throng of friends and coworkers throughout the state.

Resolved, that in his death at the very zenith of his powers, scientific medical teaching has lost an earnest, fluent and clear thinking exponent, and the practicing physician an able counselor. And be it

Resolved, that to those with whom he mingled in daily contact or frequent association—the church, the fraternal and benevolent organizations with which he fellowshipped and to whose efficiency he so ably contributed, we extend that sympathy which finds comradeship in sorrow. And be it further

Resolved, that to his grief stricken home, to the members of his household, whose loss is too personal and whose sorrow is too sacred for us to share, we offer the benediction and consolation of the memory of a noble life, nobly lived, to full fruition and "crowned with glory and honor." And be it finally

Resolved, that a copy of this memorial be furnished his family and to the various institutions and organizations of which he was a member and to the various medical periodicals for publication, and that it be made a part of the record of the proceedings of this Academy.

W. W. WADSWORTH,

F. G. JACKSON,

WILL C. MOORE,

Committee.

December 15th, 1921.

GRANT COUNTY

The Grant County Medical Society met in regular session at Marion on Tuesday evening, December 20, at which time the annual election of officers was held, with the following results: President, Dr. Harry Williamson; vice-president, Dr. V. V. Cameron; secretary-treasurer, Dr. B. C. Dale.

NETTIE B. POWELL, Sec'y.

KNOX COUNTY

The forty-sixth annual meeting of the Knox County Medical Society was held at the Y. M. C. A., Vincennes, December 13. A banquet was served, following which a 5,000 foot moving picture film of obstetrics and gynecology, by Prof. Werthein and Prof. Weibel, of Vienna, Austria, was shown. Seventy-seven physicians were present, including guests from Knox, Daviess and Sullivan counties, Indiana, and Lawrence and Wabash counties, Illinois.

Officers for the year were elected as follows: President, Dr. Chas. E. Bryan, Vincennes; vice-president, Dr. J. W. Trueblood, Monroe City; secretary-treasurer, Dr. D. H. Richards, Vincennes; censor, Dr. N. E. Beckes, Vincennes.

Adjourned.

D. H. RICHARDS, Secretary.

MONTGOMERY COUNTY

At the meeting of the Montgomery County Medical Society held at Crawfordsville, December 20, the following officers were elected for the ensuing year: President, Dr. William T. Gott, Crawfordsville; vice-president, Dr. T. Z. Ball, Crawfordsville; secretary-treasurer, Dr. B. N. Lingemann, Crawfordsville.

A. L. Loop, Sec'y.

HAMILTON COUNTY

At the December meeting of the Hamilton County Medical Society the following officers were elected for the coming year: President, Dr. K. C. Hershey; vice-president, Dr. C. R. Elfers; secretary, Dr. W. F. Baker.

After the election Dr. Karl R. Ruddell, of Indianapolis, presented a paper on "Toxic Goitre," dealing with the diagnosis and treatment. An interesting discussion followed the reading of the paper.

W. F. BAKER, Sec'y.

JASPER-NEWTON

The Jasper-Newton County Medical Society announces the following program for the coming year: January—Host, Dr. E. Besser, Remington; subject, "Pathology and Diagnosis of Different Types of Pneumonia," Dr. M. D. Gwin and Dr. W. C. Mathews. February—Host, Dr. C. C. Bassett, Goodland; subject, "Influenza, Colds, Grip, and Similar Infections; Diagnosis and Treatment," Dr. Alfred Ranier and Dr. T. E. Collier. March—Host, Dr. T. E. Collier, Brook; subject, "Muscle and Joint Infections, Acute Rheumatic Fever, Rheumatoid Arthritis; Etiology, Diagnosis, Symptoms and Treatment," Dr. G. D. Larisson, and Dr. C. E. Triplett. April—Host, Dr. E. C. English, Rensselaer; subject, "Cerebral Hemorrhage, Embolism and Thrombosis; Varieties, Symptoms and Treatment." Dr. Frank Kennedy and Dr. E. Besser. May—Host, Dr. M. D. Gwin, Rensselaer; subject, "The Tonsil," Dr. J. G. Kinneman; "Treatment," Dr. I. M. Washburn. June—Host, Dr. Frank Kennedy, Goodland; subject, "Obstetrics; Care of Mother Before Delivery," Dr. G. H. VanKirk; "Method of Delivery," Dr. C. C. Bassett. July—Host, Dr. G. D. Larisson, Brook; subject, "Typhoid Fever," Dr. L. H. Recher; "Colon and Other Infections," Dr. E. C. English. August—Host, Dr. W. C. Mathews, Kentland; subject, "Diabetes, Etiology and Symptoms,"

Dr. F. L. Morehouse; "Treatment," Dr. C. E. Johnson, September—Host, Dr. A. R. Kresler, Reusseelaer; subject, "Fractures, Neck of Femur, Colles, and Potts," Dr. E. N. Loy; "Treatment," Dr. H. S. Hewitt, October—Host, Dr. Alfred Rauier, Remington; subject, "Eczemas of Nursing Babies," Dr. E. S. Gibson. "The Tinea, Impetigo Congagiosa," Dr. F. H. Hemphill, November—Host, Dr. I. M. Washburn, Rensselaer; subject, "Diagnosis of Common Infections of Eye," Dr. A. R. Kresler; "Treatment," Dr. J. T. Martin, December—Host, Dr. G. H. Van Kirk, Kentland; subject, "Dyspnoeas," Dr. J. G. Kinneman, Annual election. Officers of this society are, president, Dr. Alfred Ranier and secretary-treasurer, Dr. O. E. Glick.

BENTON COUNTY

The Benton County Medical Society met at the home of Dr. W. H. Taylor, November 8, in regular session, and elected the following officers for 1922: President, O. M. Flack, Boswell; Secretary, J. L. Morehouse, Fowler.

All members were present except three. The society voted to meet bimonthly during the year 1922.

Dr. Mac Gillavry presented a very interesting address on Purpura Haemorrhagia and Dr. Atkinson reported an interesting method of eliminating diphtheria from schools. Dr. Hubbard reported the birth of an acephalus delivered by Dr. Taylor and himself.

Adjourned.

W. H. TAYLOR, Secretary.

TIPPECANOE COUNTY

After a 6:15 p. m. luncheon at the Hotel Lahr, Lafayette, on November 29, Vice-President Ruschli called the regular meeting to order. Minutes of previous meeting read and approved without change.

Dr. Crockett read a paper on "Résumé of Three Clinical Cases from a Diagnostic Standpoint". Cases typical of many that the general practitioner sees so often—robust and healthy appearing people, but complaining of distressing bladder symptoms.

First Case:—Perfect physical appearance; married; two months pregnant. Bladder symptoms: Frequent micturition, tenesmus, pain, bloody urine; no backache. First attack three and one-half years ago. Aggravated at each pregnancy. Cystoscopy negative except three small blebs near trigone, and right ureteral orifice red and spouting red urine, which carried tubercle bacilli, associated with colon bacilli. Pain not dominant symptom of tubercular kidney until bladder is affected; pain in not over thirty-five percent; micturition at night only after bladder involved. Nephrectomy performed and all bladder symptoms better.

Second Case:—Mrs. H. S. Seen first, April, 1921. One child. Physical appearance good, well nourished, pendulous abdomen. Complains of usual distress—bladder symptoms. First attack three years ago, repeated at long intervals; lately very severe. Urine free from blood and pus. Not up at night, as a rule. Pain increases at menstrual period, also when on feet. Cystoscopy revealed no pathology, excepting a little bagging in of bladder in region of right lower quadrant, and few small elevated points in this region. Uterus slightly anteflexed, but not fixed by adhesions. Applied properly fitting abdominal support, and distress relieved.

Third Case:—Well nourished, general physical condition good. Bladder trouble gradually developed from one year ago. Micturition frequent both night and day; pain during passage, and burning after. Never any pus or blood in urine. Tender on deep suprapubic pressure. Married, but no pregnancy. Trouble commenced one year after laparotomy with

removal of appendix, and left ovary and tube. External examination of genito-urinary negative. Cystoscopy: Lower left half of bladder, three small irregular ridges with thickening and reddening of subjacent mucosa involving the trigone. Digital palpation through vagina over this area elicited pain or tenderness. Vesicle surface at outlet irregular. Symptoms aggravated at night, but not at time of menstruation,—trigonitis, but the cause not yet determined.

Discussion:—**VAN REED:** Case of severe chills and fever with symptoms referable to kidney region. Urine from right kidney showed bacilli that were suspicious. Nephrectomy, and tubercle bacilli proven.

Another case, forty-two years old, severe pain coming on suddenly, radiating toward bladder. Relieved by morphine, hypodermatically, followed by passing large quantities of urine.

RUSCHLI:—Case, female aged sixty years. Incontinence; hysterectomy by another surgeon. Cystoscopy revealed nothing. Demonstrated urine was coming out of vagina—ureteral fistula into vagina. Anastomosed ureter into bladder. Successful.

DR. LAIRY: Quoted where teeth and tonsil infections were prone to cause kidney infections. Experiments demonstrated these infections had an affinity for genito-urinary tract. Colon bacilli demonstrated to be only a secondary contamination.

SCHREIBER: Frequently found pendulous abdomen cause of bladder symptoms. Binder relieved.

WESTFALL: Does increase of uric acid in blood have a tendency to produce nephritis?

DR. HUNTER: Blood chemistry may detect beginning nephritis before analysis of urine demonstrates it.

Dr. Crockett in closing stated that every case of persistent urinary symptoms has a source somewhere, if it can be located. Sometimes the most obvious source is overlooked.

Dr. Chenoweth reported a case of recurrent appendicitis; the first occurring ten years previously. Last attack characterized by intense symptoms accompanied by leukopenia—three thousand whites. Hurriedly operated and in two days the leukocytes were ten thousand; made an uneventful recovery.

DR. KEIFER: Often see leukopenia in grave mastoid cases, so cannot rely upon laboratory alone, but have to study all cases from the general symptoms as well.

DR. McCLELLAND: Had leukopenia in the case of a hand infection, rapidly grew worse and died.

DR. IKENS: Reported three cases of median nerve injuries, two by direct force, and one by penetrating wound. All presenting themselves for treatment some time after injury. Both sensory and motor functions injured. No trophic disturbance in the direct force cases, but in the penetrating wound in which the nerve was severed there was marked trophic disturbance. In the two pressure or force cases, the sensory function returned first, as usual, and the motor is being gradually restored; still under treatment. In the case of the severed nerve, part of the area of distribution was hyperesthetic and part anesthetic. Cut down, and with difficulty found the ends (the distal one being enlarged, cauliflower shaped), and sutured them. No infection and expect good results, but will have to wait six to twelve months yet because results are always slow.

DR. HUNTER, pathologist: The enlarged end of nerve found by Dr. Ikens showed fibrous degeneration.

The following resolution was read by Dr. Keiper and unanimously adopted:

"To the General Public:—The Tippecanoe County Medical Society heartily endorses the Anti-Spitting

Campaign now being propagated by the Tippecanoe County Tuberculosis Association.

Spitting in and on the public highways is a nasty habit, and very dangerous to public health. If you must spit, spit in a paper napkin and then burn it, especially if you have tuberculosis, syphilis, diphtheria, or any other communicable disease.

We also urge the people to buy liberally the Christmas seals offered for sale."

Legislative matters were freely discussed, and it was unanimously voiced that with the beginning of the new year, the legislative committee must be named, and that everyone must do his part by being active early in the campaign, and keeping everlastingly at it.

Members present, twenty-nine. Visitors, one.

Adjourned.

W.M. M. RESER, Secretary.

ST. JOSEPH COUNTY

The thirty-sixth annual meeting of the St. Joseph County Medical Society was held Wednesday, November 16, at South Bend, in the Auditorium of the Elks' Club. The following program was carried out: "Evaluation of Symptoms in Diagnosis," Albert E. Sterne, Indianapolis; "Reflex Abdominal Disorders," Arthur E. Elliott, Chicago; "Operations on the Gasserian Ganglion, with Report of Cases," John F. Barnhill, Indianapolis; "Conservation of the Patient," Frederick G. Dyas, Chicago. Dinner was served at 6:30 p. m. at the Oliver Hotel, followed by an address on "The Physician and the Public," by Dean Stanley Coulter of Purdue University.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

BROMIPIN 10 PER CENT.—A bromine addition product of sesame oil, containing from 9.8 to 11.2 percent of bromine in organic combination. It acts like the inorganic bromides; but since it yields its bromine more slowly, it is thought to have less tendency to produce bromism. Bromipin 10% is said to be more lasting in its action than the bromides. The dose is 4 Cc. (1 fluidrachm), which may be increased in cases of epilepsy to from 8 to 30 Cc. (2 to 8 fluidrachms). Bromipin 10 percent is a yellow oily liquid, having an oleaginous taste. Merck & Co., New York.—(*Jour. A. M. A.*, Dec. 3, 1921, p. 1819).

AMYLZYME.—An extract containing all of the digestive enzymes of the fresh pancreas of the hog. It has the power to digest starch and protein and to split fats. It is claimed that it is of value in digestive disturbances resulting from a deficiency of pancreatic secretion. Amylzyme is sold only in the form of 2 grain capsules. G. W. Carnrick Co., New York.—(*Jour. A. M. A.*, Dec. 10, 1921, p. 1891).

THEOBROMINE-P. W. R.—A brand of theobromine-N. N. R. For a discussion of the actions, uses and dosage of theobromine, see New and Nonofficial Remedies, 1921, p. 362. Powers-Weightman-Rosengarten Company, Philadelphia.—(*Jour. A. M. A.*, Dec. 10, 1921, p. 1891).

POTASSIUM MERCURIC IODIDE.—*Potassii hydrargyri iodidum.*—A complex salt, K-HgI₂, formed by the interaction of one molecule of mercuric iodide with two molecules of potassium iodide, containing about 25 percent of mercury. Potassium mercuric iodide is used for the same purposes as mercuric iodide, over which it has some advantages because of its solubility. As a germicide, it is effective since it does not coagulate albumin; however, there seems to be no work to show how much the activity is decreased when an excess of potassium iodide is pres-

ent. As a germicide, potassium mercuric iodide is used in concentrations of from 1:100 to 1:10,000. Solutions of potassium mercuric iodide may be prepared: (1) by dissolving one part by weight of mercuric iodide and one part by weight of potassium iodide in a small amount of water and then diluting to proper strength; (2) by dissolving potassium mercuric iodide in water containing potassium iodide, equivalent to about 20 percent by weight of the potassium mercuric iodide used.—(*Jour. A. M. A.*, Dec. 17, 1921, p. 1971).

MERCURY AND POTASSIUM IODIDE-P. W. R.—A brand of potassium mercuric iodide-N. N. R. Powers-Weightman-Rosengarten Company, Philadelphia.—(*Jour. A. M. A.*, Dec. 17, 1921, p. 1971).

DIPHTHERIA TOXIN-ANTITOXIN MIXTURE-SQUIBB.—Each cubic centimeter of the mixture represents 3 L+ doses of diphtheria toxin and three units of diphtheria antitoxin. It is marketed in packages of three 1 cubic centimeter ampules representing one immunizing treatment; also in packages of thirty 1 cubic centimeter ampules. For a discussion of the actions and uses of diphtheria toxin-antitoxin mixture, see New and Nonofficial Remedies 1921, p. 282. E. R. Squibb & Sons, New York.—(*Jour. A. M. A.*, Dec. 17, 1921, p. 1971).

OIL OF CYPRESS-SCHIMMEL & CO.—A brand of cypress oil-N. N. R.—For a discussion of the action and uses of cypress oil, see New and Nonofficial Remedies, 1921, p. 95. Fritzsche Bros., New York.—(*Jour. A. M. A.*, Dec. 17, 1921, p. 1971).

XEROFORM-S. AND G.—A brand of bismuth tribromophenate-N. N. R.—For a discussion of the actions and uses of bismuth tribromophenate see New and Nonofficial Remedies, 1921, p. 71. Schering & Glatz, New York.—(*Jour. A. M. A.*, Dec. 17, 1921, p. 1971).

THEOBROMINE AND SODIUM ACETATE-P. W. R.—A brand of theobromine sodium acetate-N. N. R. For a discussion of the actions, uses and dosage of theobromine-sodium acetate, see New and Nonofficial Remedies, 1921, p. 363. Powers-Weightman-Rosengarten Company, Philadelphia.—(*Jour. A. M. A.*, Dec. 24, 1921, p. 2061).

EASTMAN BARIUM SULPHATE FOR ROENTGENOLOGY.—A brand of barium sulphate for Roentgen-Ray work-N. N. R. (see New and Nonofficial Remedies, 1921, p. 58). Eastman Kodak Company, Rochester, New York.

KALMERID GERMICIDAL TABLETS POTASSIUM MERCURIC IODID.—Each tablet contains mercuric iodid 0.29 gm., potassium iodid 0.58 gm., ammonium chlorid 0.12 gm., eosin "Y" 0.0005 gm., and yields, when dissolved in water, potassium mercuric iodid 0.5 gm., with an excess of potassium iodid. For a discussion of the actions and uses of potassium mercuric iodid, see New and Nonofficial Remedies 1921, p. 198. Davis & Geck, Inc., Brooklyn, N. Y.—(*Jour. A. M. A.*, Nov. 12, 1921, p. 1573).

IODIPIN 10 PER CENT.—An iodin addition product of sesame oil containing from 9.8 to 11.2 percent of iodin in organic combination. It acts in the system similarly to the inorganic iodids. It is not broken up in the stomach, but a portion of the iodin is split off when it enters the intestine; the remaining compound is readily absorbed, and, as in the case of other fats, is largely deposited in the tissues, where it is slowly split up. Because of this behaviour, the action of iodipin 10 percent is exerted more slowly than that of the inorganic iodids. The dose is from 4 to 16 cc. (1 to 4 fluid drams) three or four times a day. Iodipin is not marketed as such, but in the form of iodipin tablets 8 grains. Merck & Co., New York.—(*Jour. A. M. A.*, Nov. 19, 1921, p. 1655).

PROPAGANDA FOR REFORM

QUINIDIN IN HEART DISEASE.—Quinidin has suddenly leaped into prominence because of its striking effects in certain forms of cardiac irregularity. To see a heart that has been constantly irregular for one or two years because of a fibrillating auricle lose its lawless and rapid beat within a few hours under the influence of this drug and resume normal rhythm and rate and maintain these for months, must attract the attention of all. The conclusions of the few clinicians who have thus far reported their investigations are in remarkable agreement as to the fact that in about half of the cases of auricular fibrillation, Quinidin is capable of restoring to the sino-auricular node the control of the heart, so that, for a time at least, the working of the heart is normal. However, while those who report on the effects of Quinidin are fascinated by the possibilities of the application of this drug in medicine, they are wisely conservative in their statements and frankly admit that much is yet to be learned concerning its proper use. It is to be hoped that the few favorable reports will not lead to the indiscriminate use of the drug in every type of irregular and rapid type of heart.—(*Jour. A. M. A.*, Dec. 3, 1921, p. 1822).

OXYGEN THERAPY.—The difficulties of oxygen therapy do not lie in any danger from undue intake of oxygen, for no abnormal increase in vital processes occurs even when mixtures very rich in oxygen are inhaled. The problem is rather one of technic in securing an actual introduction of more oxygen into the lungs under mechanical conditions of tolerable comfort. The usual haphazard methods of oxygen administration are of slight avail. When oxygen was administered with effective breathing devices in cases of cardiac insufficiency, relief of cyanosis and slowing of the pulse were secured. In pneumonia, the results were sufficiently impressive to permit the conclusion that oxygen therapy assumes a rational role in the treatment of the disease.—(*Jour. A. M. A.*, Dec. 3, 1921, p. 1820).

DELANO'S RHEUMATIC CONQUEROR.—The state chemists of North Dakota analyzed this "rheumatic cure" some years ago and reported: "This preparation is essentially starch, with a small amount of talc, containing a little quinin coated with calcium carbonate."—(*Jour. A. M. A.*, Dec. 3, 1921, p. 1838).

BUTYN.—The Council on Pharmacy and Chemistry reports that Butyn is the name applied by The Abbott Laboratories to a new local anesthetic proposed for use in place of cocaine in surface anesthesia in the eye and for anesthesia of other mucous membranes. Butyn is a chemical body, of definite, non-secret composition, namely para-aminobenzoyl-gammadimethylamino-propanol sulphate. Pharmacologic investigations indicate that Butyn may take the place of cocaine for surface anesthesia of mucous membranes, and that it may be superior for this purpose, and especially for use in the eye, to other synthetic anesthetics, for the reason that it can be used in materially lower concentrations. So far, however, the therapeutic value of Butyn has not been proved by adequate clinical trials. For this reason, the Council postponed the acceptance of the drug for New and Nonofficial Remedies and published a preliminary report on Butyn for the information of those who wish to put Butyn to clinical trial.—(*Jour. A. M. A.*, Dec. 10, 1921, p. 1891).

INTRAVENOUS SPECIALTIES OF THE INTRAVENOUS PRODUCTS COMPANY OF AMERICA.—This firm's list of specialties bears a striking resemblance to those of other "intravenous specialty" firms. Its Endoarsen,

like Venarsen of the Intravenous Products Company of Denver, is stated to contain a cacodylate ("dimethylarsenate") together with mercury and iodid. Venarsen was reported on unfavorably by the Council on Pharmacy Chemistry, in 1915. The inferior efficacy of sodium cacodylate and its worthlessness as a spirocheticide have been demonstrated. Like other "intravenous" firms, this company advertises the intravenous administration of drugs such as sodium iodid and hexamethylenamin. The objections to and the dangers of indiscriminate administration of drugs intravenously was recently emphasized in a report of the Council on Pharmacy and Chemistry on "Some of Loeser's Intravenous Solutions".—(*Jour. A. M. A.*, Dec. 10, 1921, p. 1912).

"THE ALSAKER WAY."—R. L. Alsaker advertises a series of "Books That Teach The Alsaker Way to Health and Efficiency". Rasmus Larssen Alsaker was graduated by Bennett Medical College, Chicago, in 1910. Alsaker's book "Curing Diseases of Heart and Arteries" seems to be the book that is pushed at present. The first part of this book contains certain elementary facts of physiology and hygiene that could be found in the ordinary common school textbooks on such subjects. The therapeutic phases of the subject are so treated that the average reader might well reach the conclusion that all physicians, except Alsaker, are either fools or rogues, and that from Alsaker alone flows the only pure, unadulterated, 100 percent medical knowledge. Alsaker's book may be counted on to have a very definite effect on the person who accepts its teachings. It may lead any patient, who because of an impaired circulatory system is under the care of a physician, to abandon such rational means as the physician might recommend and attempt self-treatment.—(*Jour. A. M. A.*, Dec. 10, 1921, p. 1909).

COD LIVER OIL IN RICKETS.—While there is a growing belief that cod liver oil is of distinct therapeutic value in rickets, many of the experiments along this line are not sufficiently objective to be entirely convincing. Now, however, Park and Howland have furnished the direct ocular proof of the effects of cod liver oil on rickets which roentgenograms afford. The results in many cases have been so consistent that they feel justified in stating definitely that cod liver oil brings about a change in the bone which, if the diet is not too faulty, amounts to complete cure.—(*Jour. A. M. A.*, Dec. 31, 1921, p. 2122).

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act, chiefly because the curative claims advanced for them were held false: Salt-Sulphur Water (Salt-Sulphur Water Company), a water found to consist wholly or in part of a filthy and decomposed putrid animal or vegetable substance and claimed to be invaluable in the treatment of inflammatory and catarrhal conditions of the stomach, intestines and diseases of the liver. Pildoras Uristptic (Davis & Lawrence Company and New York Medicine Company), pills consisting essentially of cubeb, methylene blue, salol and kava kava, and asserted to be anticonvulsive, diuretic, antiseptic and resolvent. Boquette's Family Remedy (Boquette Remedy Company), falsely claimed to be of value for chills and fever, rheumatism, lumbago, etc., consisting essentially of a solution of Epsom salt and saltpeter, and asserted to be of value in a large number of diseases. Volta Powder (Volta Company), essentially a mixture of free sulphur, impure iron (ferric) oxid, and a trace of essential oil, and sold

as a treatment for rheumatism, sciatica, gout, etc. Carey's Marsh Root (Carey Medical Corporation), consisting essentially of plant extractives, sodium potassium salts, salicylates, aromatic oils, glycerin, water and alcohol; asserted to be of value in Bright's disease, diabetes and all urinary troubles. Sterling Injection (Western Wholesale Drug Company), a watery solution containing opium, borax, and a trace of sulphate, and recommended for the treatment of gonorrhea.—(*Jour. A. M. A.*, Nov. 5, 1921, p. 1513).

ENDOCRINOLOGY AND PSEUDO-ENDOCRINOLOGY.—R. G. Hoskins, professor of physiology, Ohio State University College of Medicine, pleads for a greater degree of discrimination on the part of physicians in evaluating not only proper data but also the various agencies either seeking support in, or exploiting, this field. The latter aspect of the situation deserves special emphasis. Those who purpose acting as purveyors to the medical profession must accept the status of purveyors. The physicians or laboratory investigator of the medical sciences shall not exploit for commercial gain the result of his studies. At the present time a commercial campaign is being carried on by a "laboratory" purporting to specialize in endocrine products. The mail of physicians is flooded with a series of postcards, each card recommending and suggesting the use of the proprietary product of this self-styled laboratory for conditions ranging from eczema to epilepsy, and from obesity to tuberculosis. This free postcard advice is reinforced by reference to "monographs" and a trade journal in which scientific medicine is systematically belittled as unpractical. This advertising campaign is ostensibly under the supervision of the enterprising Mr. Hyde, the merchant of the firm. Mr. Hyde is a profound admirer of the eminent Dr. Jekyll, the medical director.—(*Jour. A. M. A.*, Nov. 5, 1921, p. 1499).

SCHICK TEST.—The entire absence of positive reactions to the Schick test in about one dozen children should lead to the suspicion that the particular lot of toxin used is inactive. It is not unlikely that toxin in small outfitts may deteriorate after leaving the manufacturer.—(*Jour. A. M. A.*, Nov. 12, 1921, p. 1594).

ESTIVIN.—This is sold by Schieffelin & Co., New York. A request for a statement of the composition of this product sent to Schieffelin & Co., by the Council on Pharmacy and Chemistry, brought the indefinite and therefore meaningless statement that Estivin is an extract of Rosa Gallica containing no alcohol or foreign ingredients.—(*Jour. A. M. A.*, Nov. 12, p. 1594).

INTRAVENOUS COMPOUND (LOFFLER).—This is exploited by the Intravenous Chemical Company of Chicago. While physicians are asked to use this preparation and told of the profits to be derived from its use, they are not informed of its composition. From the analysis of this preparation in the A. M. A. Chemical Laboratory it was concluded to be a mixture of alkali chlorate and nitrate and boric acid probably produced by fusing together the constituents. Its composition is very similar to that of Oxychlorin and Zyme-oid, which were analyzed by the laboratory nearly fourteen years ago. Intravenous Compound (Loffler) is a nostrum of secret composition which physicians are asked to inject into the veins of their patients. It must be purchased in connection with some supplementary material, "a complete set of apparatus" sold by the same concern. Its successful administration is said to depend on following a technic detailed either in a booklet sent out by C. L. Loffler or given by him in a "postgraduate course" which costs physicians fifty dollars unless they have purchased six dollars' worth of another nostrum, "Thymozene". The intravenous administration of drugs is impressive. To the patient

the technic and its psychic effects is striking. The dangers of intravenous medication are matters of record, and yet physicians are asked to administer this preparation, the composition of which and the effects produced by it are unknown to him.—(*Jour. A. M. A.*, Nov. 12, 1921, p. 1591).

IODIN AND GOITER.—According to Marine, if the iodin store in the thyroid is maintained above 0.1 percent, no hyperplastic changes and, therefore, no goiter can develop. The studies of Marine and Kimball show that simple or endemic goiter can be prevented by the administration of from 3 to 5 mg. of iodin twice weekly, over a period of a month and repeated twice yearly. Is it not time for the medical profession to give special attention to this? If prevention of goiter is good preventive medicine, it is better preventive surgery.—(*Jour. A. M. A.*, Nov. 12, 1921, p. 1574).

MIDOL HEADACHE TABLETS.—Midol was analyzed in the A. M. A. Chemical Laboratory in 1912. At that time the chemists reported that Midol was sold in the form of tablets and to contain amidopyrin (first introduced as pyramidon) as their essential constituent. Amidopyrin is a pyrazolon derivative related to antipyrin, and it has no place in preparations for self drugging.—(*Jour. A. M. A.*, Nov. 19, 1921, p. 1674).

SELENI-BASCCA.—A campaign of free publicity is carried on for an alleged remedy for cancer. The press agent material has been of two kinds—for medical journals and for newspapers. That for medical journals has been sent out on the stationery of the Medical News Bureau, 77 Seventh Ave., Brooklyn, N. Y., D. E. Woolley, Manager. The items sent out to medical journals stated that the "Basic Cancer Research" had been organized to develop a treatment of cancer by the use of selenium and tellurium. The material received by newspapers was sent out by the "Cosmopolitan Cancer Research Society", 847 Union St., Brooklyn (the same address as the Basic Cancer Research). The secretary of the Cosmopolitan Cancer Research is D. E. Woolley. The name of the preparation which the Basic Chemical Corporation puts out is Seleni-Bascca. A specimen, labeled "SELENIBASCCA. A mixture of Colloidal Selenium in tablet form", was examined in the A. M. A. Chemical Laboratory. The tablets were found to contain only about 1.3 percent of selenium, and the product was not colloidal as claimed. The composition of Seleni-Bascca resembles that claimed for Sulpho-Selene, a preparation reported on by the Council on Pharmacy and Chemistry some years ago, but it contained no bile salts (a constituent claimed to be present in Sulpho-Selene).—(*Jour. A. M. A.*, Nov. 19, 1921, p. 1672).

SERUM FOR PERNICIOUS ANEMIA.—"Ph. Rahtjen, A. M., Ph. D." Pasadena, Calif., informs laymen that he has immunized goats against the germ of pernicious anemia and that patients have responded favorably to the "serum". Reference to medical literature does not disclose just what Rahtjen's serum is, and a search of American medical literature for some years past fails to disclose any publication by Rahtjen on any subject. In 1917 the Rahtjen Tuberculosis Sanatorium, San Francisco, Calif., exploited the Rahtjen Cure for Tuberculosis with the claim that "the remedy seems to cure tuberculosis in all its forms with equal celerity and certainty"; and yet people are still dying of tuberculosis. In 1920, so the newspapers had it, Rahtjen was offering a "New-Life Fluid" which was a long step forward to counteract old age. This was in March, 1920, yet people continue to grow old. According to recent newspaper accounts, Rahtjen is making his extract from Mexican bulls and cows; the first for males and the second for females.—(*Jour. A. M. A.*, Nov. 26, 1921, p. 1753).

BOOK REVIEWS

NOSTRUMS AND QUACKERY. Articles on the nostrum evil, quackery and allied matters affecting the public health reprinted with or without modifications, from *The Journal of the American Medical Association*. Volume II, illustrated, 832 pages. Published by the American Medical Association, 535 N. Dearborn St., Chicago, Ill. Price, \$2.00.

Ten years ago the American Medical Association published the first edition of the first volume of this book. A year later a second, and enlarged, edition of the first volume was issued. Since that time *The Journal of the American Medical Association* has published, week by week, articles on the nostrum evil, quackery and allied matters affecting the public health. All this material has been collected and appears in the present volume.

Quackery can never be defended; the "patent medicine" business, however, need not be fundamentally fraudulent. There is a place for home remedies for the self-treatment of simple ailments. Unfortunately, the home remedies of today are, generally speaking, those secret nostrums commonly called "patent medicines" and the methods of "patent medicine" promotion make these products a menace to the public health. The average "patent medicine" is so advertised as to frighten well people into the belief that they are sick for no other purpose than that of causing them to purchase the nostrums.

The present volume is a veritable encyclopedia of information on the subject it treats. The book contains nineteen chapters. The titles of some of these are: "Alcohol, Tobacco and Drug Habit Cures," "Consumption Cures," "Cosmetic Nostrums," "Deafness Cures," "Epilepsy Cures," "Female Weakness Cures," "Nostrums for Kidney Disease and Diabetes," "Medical Institutes," "Miscellaneous Nostrums," "Obesity Cures," "Quackery of the Drugless Type" and "Tonics, Bitters, Etc."

This partial list of chapters gives but a poor idea of the vast fund of information contained in the book. To make the volume still more valuable it contains an index of twenty-two pages, two columns to the page, which includes references to every article appearing in the first volume of "Nostrums and Quackery" as well as to all articles in the present volume.

The book is free from stilted or highly technical language. The articles have evidently been written with the idea that the facts they contain belong to the public. In the Preface, it is emphasized that the work which this volume represents is wholly educational in character—not punitive. "The matter that appears in this book has been prepared and written in no spirit of malice and with no object except that of laying before the public certain facts the knowledge of which is essential to a proper conception of community health."

HISTORY OF MEDICINE, WITH MEDICAL CHRONOLOGY, SUGGESTIONS FOR STUDY AND BIBLIOGRAPHIC DATA, by Fielding H. Garrison, M.D., Lt.-Colonel, Medical Corps, U. S. Army, Surgeon General's Office, Washington, D. C. Third edition, revised and enlarged. Octavo of 942 pages, with 257 portraits. W. B. Saunders Company, Philadelphia and London, 1921. Cloth, \$9.00 net.

Every medical student or busy practitioner should be interested in the history of medicine. Much of what has been written by Dr. Garrison reads like a novel and holds the attention of the reader if he is interested in following the development of medicine and surgery from ancient times down to the present. As has been stated in the introductory chapter, the

history of medicine is the history of human fallibility and error. The history of the advancement of medical science, however, is the history of the discovery of a number of important fundamental principles leading to new views of disease, to the invention of new instruments, procedures, and devices, and to the formulation of public hygienic laws, all converging to the great ideal of preventive or social medicine; and this was accomplished by the arduous labor of a few devoted workers in science. The development of science has never been continuous nor even progressive. Ideas of the greatest scientific moment have been throttled at birth or veered into a blind alley through some current theologic prepossessions, or deprived of their chance of fruition through human indifference, narrow-mindedness, or other accidental circumstances. It is no exaggeration to say that science owes most to the shining individualism of a few chosen spirits. Apart from this, "the success of a discovery depends upon the time of its appearance."

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In the preparation of this book the author has taken advantage of the Surgeon General's library, one of the most comprehensive in the world, though every effort has been put forth to obtain information from any source that would add to the material at hand. The whole book, aside from the appendices and index, has been divided into twelve chapters, and the enumeration of their titles gives a fair idea of the scope of the work: I. The Identity of All Forms of Ancient and Primitive Medicine. II. Egyptian Medicine. III. Sumerian and Oriental Medicine. IV. Greek Medicine. V. The Byzantine Period (476-732 A. D.). VI. The Mohammedan and Jewish Periods. VII. The Medieval Period (1096-1438), Cultural and Social Aspects of Medieval Medicine. VIII. The Period of the Renaissance, the Revival of Learning, and the Reformation (1453-1600). IX. The Seventeenth Century: The Age of Individual Scientific Endeavor. X. The Eighteenth Century: The Age of Theories and Systems. XI. The Nineteenth Century: The Beginnings of Organized Advancement of Science. XII. The Twentieth Century: The Beginnings of Organized Preventive Medicine.

EYE, EAR, NOSE AND THROAT. Volume III, 1921, of the Practical Medicine Series, under the editorship of Dr. Casey A. Wood on the Eye, Dr. Albert H. Andrews on the Ear, and Dr. George E. Shambaugh on the Nose and Throat. The Year Book Publishers, Chicago. Price of a volume, \$1.75. Price of the series of eight volumes, \$12.00.

As usual this is a very interesting volume and will be read with interest and profit by specialists. Some of the abstracts are a reflection of articles on military experiences together with references to histories

(Continued on page xxii)

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(Continued from page 38)

of cases arising from battle injuries or camp diseases. There are also references to lethargic encephalitis and focal infections as applied to the special branches of medicine under consideration. As in previous volumes, over half of the book is devoted to the eye, and but little of a real progressive nature, as reported in current literature, has been omitted. The part devoted to diseases of the ear offers abstracts of many articles concerning the diagnosis and treatment of diseases of the sound perception apparatus, and also the late advances in mastoid surgery as based upon extended experience through the influenza epidemic. In the part covering the nose and throat much is devoted to accessory sinus disease in addition to the usual subjects. While it has not been possible to abstract anything and everything that would appear in print concerning the diseases under discussion, yet the editors have succeeded well in furnishing abstracts of papers on practical rather than experimental subjects, and they have taken the cream of the articles that have appeared in current literature.

TUBERCULOSIS AND HOW TO COMBAT IT, by Francis M. Pottenger, M.D., A.M., LL.D., F.A.C.P. C. V. Mosby Co., St. Louis. Cloth, \$2.00 net.

This is a book for the patient. It describes the nature of the disease with which the patient is suffering, pertinent facts concerning the source and manner of infection, the development of resistance or immunity, the course and care of the disease when once established, the things that interfere with cure, and the maintenance of health when once attained. In the main the book answers the questions that are most often asked by tuberculous patients, and it tells in an understandable way what must be done in order to combat the disease, and this includes many subjects, such as open air, rest, exercises, food, baths, climate, tuberculin treatment, sanitarium treatment, home treatment, etc.

PRACTICAL PSYCHOLOGY AND PSYCHIATRY, by C. B. Burr, M.D., Medical Director of Oak Grove Hospital, Flint, Michigan. Fifth edition, revised. F. A. Davis Company, Philadelphia. Cloth, \$2.00 net.

This is a ready reference book for the nurse and practitioner, and discusses briefly psychology in the various forms of insanity, with causes, course and approved method of management. The author long has been known as an expert in mental and nervous diseases, and is competent to handle this subject in an authoritative manner.

THE ETIOLOGY OF EPIDEMIC ENCEPHALITIS

Certain resemblances of epidemic (lethargic) encephalitis to poliomyelitis have stimulated two similar investigations, which resulted in opposite conclusions. Amoss found that the serum of patients convalescing from encephalitis does not protect monkeys against the inoculation of poliomyelitis virus, whereas Neustaedter, Larkin and Banzhaf found that it does result in protection. We may assume, *a priori*, that the difference in results is due to the method; Neustaedter and his co-workers incubated the virus with the serum, while Amoss followed the technic he used previously with Flexner and Eber-

son. He administered the serum intraspinally and then injected large quantities of virus intravenously. The negative results of Amoss seem convincing, but the slight protection proved by the experiments of Neustaedter demands explanation. Several years ago it was found that the serum of patients suffering from herpes zoster was able to neutralize the poliomyelitis virus. It is therefore possible that the encephalitis virus is, like that of zoster, kindred, but not identical with the virus of poliomyelitis.—*Jour. A. M. A.*, Dec. 10, 1921.

OPTIC NEURITIS IN SERUM SICKNESS

In the case reported by V. R. Mason, Los Angeles (*Journal A. M. A.*, Jan. 14, 1922), certain abnormalities were discovered which pointed to involvement of the central nervous system in the reaction of the organism to a foreign serum. The patient was admitted to the hospital on the second day after the onset of acute lobar pneumonia. Type I pneumococci were grown from washed sputum. During the third, fourth, fifth and sixth days of the disease, the patient received 500 c.c. of Type I antipneumococcus serum intravenously. His temperature fell by crisis on the seventh day of the disease. Severe serum sickness appeared on the ninth day, and was present for fourteen days. During the course of the serum disease, a well marked, bilateral optic neuritis was observed. This was associated with marked lethargy and an increase of the globulin and cellular content of the cerebrospinal fluid. The optic neuritis was not associated with demonstrable visual disturbances. At the end of three months, the fundi had returned to normal in appearance.

METHODS OF PRECISION IN DIAGNOSIS OF DIABETES

In the cases cited by Henry J. John, Cleveland (*Journal A. M. A.*, Jan. 14, 1922), the condition was diagnosed as diabetes mellitus by the patient's physician on the basis that she had sugar in the urine. She was put on a rigidly restricted diet and kept on it until she had lost almost 50 percent of her weight; but she still showed sugar in the urine. Further examination revealed that she had a normal blood sugar content; and her ability to utilize carbohydrates—the glucose tolerance test—was demonstrated to be normal by a perfectly normal curve; that is, she was able to utilize all the carbohydrates one could give her. This was strikingly demonstrated later on, when a heavy carbohydrate diet, high in calories as well, failed at any time to bring her blood sugar above the normal level. These findings show clearly that the case was not one of diabetes, in spite of the fact that there was sugar in the urine, but a case of a kidney permeable to sugar, a fairly common condition.



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Owned, Published and Controlled by the Indiana State Medical Association
ISSUED MONTHLY under the Direction of the Council

Volume XV
Number 2

FORT WAYNE, IND., FEBRUARY 15, 1922

Per Year, \$3.00
Single Copy, 30 Cents

CONTENTS

ORIGINAL ARTICLES

PAGE

Present Day Clinical Cardiology. (From the Department of Internal Medicine of the University of Michigan). George R. Herrmann, Ann Arbor 39

Epidemic Encephalitis. W. A. Fankboner, Marion 47

Some Professional Shortcomings. William A. Hollis, Hartford City..... 54

The Physician: Mysticism and Symbolism in Relation to the History of Medicine. Frank B. Wynn, Indianapolis 57

EDITORIALS

PAGE

A New Synthetic Local Anesthetic..... 62
Another Influenza Epidemic..... 62
Camouflaged Salesmanship 62
Income Tax Returns for 1921..... 63
Editorial Notes 64

DEATHS

John T. Newton, St. Bernice; Edwin B. Brigham, Indianapolis; Cyrus L. Wilson, Ewing; Charles L. Boyd, Paoli; Frederick L. Bunch, Muncie; J. H. Warren Meyer, Denver, Colo.; Samuel C. Loring, Plymouth 63

(Continued on Advertising Page VIII)

Next Annual Session, Muncie, September 27, 28, 29, 1922. List of Officers and Committees on Adv. Page 2.
Entered as Second Class Matter, January 20, 1908, at the Postoffice at Fort Wayne, Indiana, under Act of Congress of March 3, 1879. Accepted for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized October 18, 1918.

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OFFICE OF PUBLICATION: 406 West Berry Street, FORT WAYNE, INDIANA

VOLUME XV

FEBRUARY 15, 1922

NUMBER 2

ORIGINAL ARTICLES

PRESENT DAY CLINICAL CARDIOLOGY*

By

GEORGE R. HERRMANN, M. D.
ANN ARBOR, MICHIGAN

(From the Department of Internal Medicine of
the University of Michigan)

Two decades ago physicians were content to classify the disturbances of the pulse as regular or irregular. Great advances, however, have been made within the last decade and a half in the study of heart disease, and especially of the disorders of rate and rhythm. Sir James MacKenzie of Scotland, with his simple polygraph but a keen unequaled power of observation, gave the first impulse and inaugurated a new era in the study of heart disease, by his explanation of the mechanism of the persistently irregular pulse. Wilhelm Einthoven of Leyden, a Dutch physiologist, applied the string galvanometer to the study of the electrical phenomena of cardiac mechanism. This instrument, the electrocardiograph, in the hands of the inventor and Sir Thomas Lewis of London, has revolutionized our knowledge of the mechanism of the heart action. We are indebted to these pioneers of modern cardiology for the firm concrete present-day conception of heart disease. Their writings, with those of a few others in this country and abroad, have dispensed all the vague intangible ideas that more or less have mystified the practice of cardiology and instead have established a definite science founded on physiological, anatomical and etiological facts. What the present decade will produce no one can predict. Our research efforts are directed toward the corroboration or verification of some of the physiological points and the collection of clinical and pathological statistics.

In the diagnosis of heart disease, a careful clinical history usually points to important etiological factors as acute rheumatic fever, chorea, "growing pains," repeated attacks of tonsilitis,

syphilis, or some other severe infectious disease, or exophthalmic goitre. A negative history, however, in a case with mitral stenosis does not discount the diagnosis of rheumatic heart disease. Likewise the denial of venereal disease does not influence one in the presence of a free aortic regurgitation with an aortitis or other stigmata of syphilis including a positive complement fixation test. Except for cases of cardiac neurosis and effort syndrome, a reliable history is the index of the functional condition. If there has been a cardiac break, that is, heart failure of the congestive type, there is a story of orthopnea, cyanosis, edema, pain under the right costal margin, from the stretched liver capsule as a result of engorgement, etc. The anginal type of heart failure is accompanied by graphic description of the typical radiating cardiac pain of angina pectoris. The limit of cardiac function is further defined by the history as to whether the patient is able to carry on his usual activities, or only slightly to moderately curtailed activity, or only greatly diminished activity, or no activity whatsoever without distress.

The physical examination, however, yields the *reliable signs* upon which we can safely base our conclusions that a patient has, or what is equally important, does not have heart disease. By our term heart disease, we mean actual or potential myocardial changes due to functional or organic damage to the heart muscle and congenital cardiac malformations, which will sooner or later produce symptoms.

In the general cardiovascular inspection, *distinct engorgement of the neck veins*, that is, overdistention signifying an abnormally increased venous pressure in veins raised above the level of the heart's base is evidence of heart disease. Increased abdominal and thoracic muscle tension, or intra-abdominal and intrathoracic pressure including mediastinal tumors must, of course, be ruled out before concluding that the sign is the result of cardiac embarrassment with engorgement of the right auricle.

Palpation may reveal a *definite thrill*, a distinct "purr" at the apex or over the base of the heart. A real thrill is the palpable counter-

* Given before the Fort Wayne Medical Society, December 20, 1921.

part of the rumbling apical diastolic murmur of mitral stenosis; a loud rasping basal systolic murmur of aortic stenosis, or congenital pulmonary stenosis, patent ductus arteriosus or interventricular septum defect; or more rarely the basal diastolic murmur of aortic insufficiency. This finding, a thrill, when unmistakable, is a dependable sign of heart disease. The vibration of the chest wall from an overactive heart is to be differentiated.

Cardiac enlargement is positive evidence of heart disease. Definite clinical or bedside signs are few and not infallible. The outermost part of the circumscribed apex impulse is the best guide to the size of the heart. In normal and moderately large hearts it corresponds to the left border, while in very large hearts it indicates enlargement but not the extent of the left border to the left. An apex impulse extending outside the midclavicular line or more than 11.5 c.m. to the left of the midsternal line in the 5th intercostal space, or better, in the 6th intercostal space, in the absence of causes for displacement gives a clinical indication of heart disease. Orthodiagrams or teleroentgenograms give exact measurements and consequently exact evidence of enlargement, when the latter is present, thus diagnosticating heart disease.

The rumbling *apical diastolic murmur*, the characteristic diagnostic finding in developed mitral stenosis denotes rheumatic heart disease, in which the myocardium is always directly affected. The presence of Aschoff bodies in the myocardium is proof of the involvement of the heart muscle in acute rheumatic fever.

The high pitched *basal diastolic murmur*, characteristic of frank aortic insufficiency designates usually rheumatic heart disease in a young individual and a syphilitic heart disease in the middle aged individual. Myocardial involvement is, as a rule, more widespread and more severe in syphilitic aortic insufficiency than in that of rheumatic origin. The root of the aorta is affected and the coronary arteries are involved especially at their origins.

Aneurism of the aorta is a manifestation of cardiovascular syphilis, which is not infrequently, especially in the south, a presenting complication which signifies accompanying heart disease.

Generalized arteriosclerosis produces nutritional disturbances enough in the myocardium to impair the structure as well as the function of the latter.

Chronic Nephritis likewise through toxins, blood changes, arterial changes, blood pressure changes, or what not, damages the heart muscle invariably and produces great cardiac enlargement as shown in a series of 60 cases which were studied clinically, electrocardiographically, and pathologically. The series

shows ventricular weights of 250 G. and over, and myocarditis in every case in which the microscopic study of the kidneys showed chronic degenerative changes.

Persistent hypertension with the blood pressure reading constantly 25 to 30 m.m. of mercury higher than the accepted average normal level for the patient's age and sex, always results in cardiac enlargement and myocarditis. Our series showed ventricular weights of 250 G. and over in all cases with persistent blood pressures of 140 m.m. Hg. and over.

The presence of any one of the grave disturbances of cardiac rhythm as *alternation*, *heart block*, *auricular flutter*, or *auricular fibrillation* is sufficient bases for the diagnosis of heart disease.

Any one of the etiological factors, the signs, or the valve lesions would suffice as a topic for a lengthy discourse. We have selected the last mentioned group of reliable signs of heart disease for fuller discussion. The disturbances of the cardiac mechanism, though of the greatest importance, have been more or less unemphasized until clinical electrocardiography analyzed them and gave the basis for the simple rules and tests, which make possible the accurate bedside differential diagnosis.

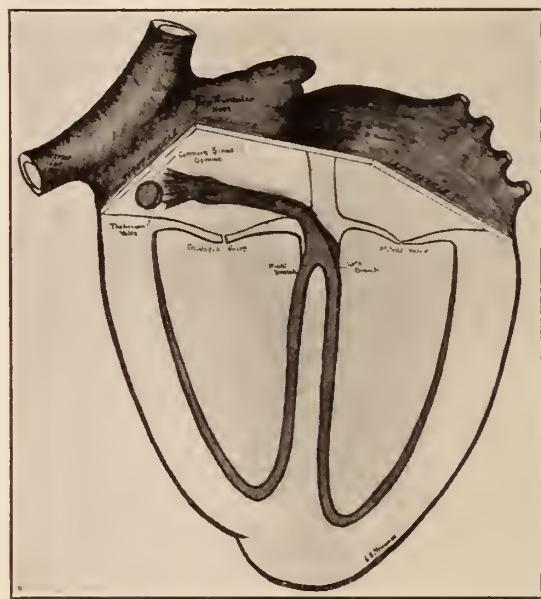


Figure 1. A diagrammatic representation of the special structures that control the origin and conduction of the impulses which regulate the cardiac mechanism.

At this point it seems logical to take up, in review, the special anatomy (Fig. 1) and physiology of the heart which does not receive very great emphasis even in our present day fundamental courses. The first structure of importance is the sino-auricular or Keith Flack Node, the so-called pace-maker of the

human heart which lies at the junction of the superior vena cava and the right auricle. The auriculoventricular or Tawara node, lies in the edge of the auricular septum tissue at the posterior and right border just anterior to the thebesian valve of the coronary sinus. The auriculo-ventricular or His bundle proper begins at this node and coursing almost horizontally forward and to the left, but keeping on the right side of the central fibrous body, to the anterior part of the membranous part of the interventricular septum, the bundle forks. The left branch perforates the membrane, enters the subendocardial space of the left ventricle immediately beneath the point of junction of the anterior and right posterior cusp of the aortic valve. It branches freely almost immediately and spreads out under the endocardium, as the freely anastomosing syncytial Purkinje network. The right division soon becomes subendothelial but passes downward in the moderator band or its representative proceeding directly to the base of anterior papillary muscle as a single strand, before breaking up into the subendothelial arborizations of the Purkinje tissue lining the right ventricle. The vagus nerves have fibers distributed to the sino-auricular and auriculo-ventricular nodes.

The physiology or mechanism of the normal heart beat is intimately associated with the special structures just described. The practical theory is that there is a constant building up (anabolism) of certain combined material having a distinct potential energy. This metabolic process occurs at a certain constant rate regularly and uniformly in every heart muscle cell. The accumulation of energy rises to a constant level where it "touches off" and falls promptly to zero. The level of discharge is always reached in the same time. This specialized neuromuscular tissue in the sino-auricular node, the pacemaker, holds control by virtue of its supreme lability or its faster rate of anabolism assuming that the process in the ordinary heart muscle is on a slower incline. The physico-chemical changes taking place in the sino-auricular node produce an electrical stimulus, a difference of potential, which can be detected by the string-galvanometer or electrocardiograph. This stimulus or impulse spreads with equal speed in all directions through the auricular muscle, "touching off" all the products of anabolism and liberating the energy of the auricular contraction. The impulse is then taken up by the auriculo-ventricular node transmitted through the His bundle and by its branches to the subendothelial arborizations of the Purkinje network of each ventricle. The time consumed by the stimulus in passing through the auriculo-ventricular node and His

bundle normally never exceeds .17 to .18 seconds (the P. R. interval of the electrocardiogram) while the intraventricular spread takes place in .06 to .08 seconds (the QRS interval of the electrocardiogram). Thus the spread of the impulse or excitation wave is very rapid, the rate of transmission through the specialized tissues being 5,000 m.m. per second, while that through the ordinary heart muscle tissue is only 500 m.m. per second. The excitation of all parts is almost instantaneous, the energy is liberated and contraction results.

The disturbances of this mechanism under the influence of disease are what interests us chiefly. The pathological physiology gives us a clear conception of the clinical disorders of cardiac action.

The vagus nerves are distributed to the sinus node and have been proven to exert a strong inhibitory influence over the rate of stimulus formation. When the restraint is constant as in vagotonic individuals, athletes, or in basal brain tumor or meningitis, hypertension, pregnancy, jaundice, and in acute febrile convalescent cases, or following pilocarpin administration we find a slowing to a heart rate of 60 or even as low as 50, which we term *Simple Sinus Bradycardia*.

If the vagus tonus is periodic, as is often associated with respiration, we have a regularly repeated irregularity, the periodic waxing and waning of especially the youthful heart, also strikingly demonstrated by palpation of the dog's heart. This we term *Sinus Arrhythmia*.

Release of the vagus inhibition by paralysis, as produced by atropin, increases the heart rate to between 150-160 at the most. Exercise, excitement, fright, nervousness, the effort syndrome, fevers and hyperthyroidism and sometimes unknown causes produce fairly persistent increases in the heart rate. This condition we term *Simple Sinus Tachycardia*.

Heart Block depends for its type upon where the affection strikes and to what extent the special structures are involved. *Sino-auricular block* is occasionally attributed to excessive vagus inhibition producing a completely dropped beat now and then. In this condition auricles as well as ventricles fail to contract, as the block is in the pacemaker. In the persistent S-A block, the next most irritable part of the specialized tissue, the auriculo-ventricular node or if this too is damaged, the junctional tissues assume the role of pacemaker and establish an auriculo-ventricular or junctional rhythm with or without retrograde stimulation of the auricle.

Auriculo-ventricular block results from pathological lesions in the A-V node or His bundle and may be of varying degrees. The first stage of A-V block is where there is only *delayed conduction in the His bundle*. The next lowest

grade is where one auricular impulse out of 8 to 20 fails to pass the His bundle and consequently fails to produce ventricular excitation, and a dropped beat is the result from this 20 to 19, or 8 to 7 *partial heart block*. We may get any degree of auriculo-ventricular block to such high degrees as 2 to 1, 4 to 1, even 6 to 1, mixtures or irregular blocking and finally *complete A-V block* with independent auricular and ventricular rhythms, with the regular idioventricular rhythm at a rate of 40 or less.

Besides blocks in the A-V or His bundle, we may have delayed conduction, incomplete or complete block in either the right or left branch of the His bundle, these we term *incomplete or complete bundle branch blocks*. Anatomically, the right branch proceeding as a single strand to the anterior papillary muscle on the right is more prone to injury than the left branch which breaks up just as it enters the subendocardial space of the left ventricle and consequently an extensive lesion is required to produce a block. Clinical experience agrees with these anatomical facts. In a series of 6,000 routine electrocardiograms we collected 32 cases of complete right bundle branch block and only one case of left bundle branch block. In the same series of 6,000 curves there were 32 incomplete right and four incomplete left bundle branch blocks. Occasionally the fibrosis which causes bundle branch block on one side spreads through the upper septum and involves the other side producing double bundle branch block or interventricular block with resulting complete heart block.

Arborization block due to wide spread lesions in the freely anastomosing Purkinje network cannot be considered established as a clinical entity.¹²

Extrasystoles, premature or ectopic beats, originate at some point other than the sinus node and break the regular rhythm by coming earlier than the regular beat. Some point in the auricular or ventricular muscle or in the junctional and most rarely in the lower part of the sino-auricular node becomes more irritable, due to some focal pathology or pathological physiology, than the tissues in the head of the sino-auricular node and consequently the anabolism rises even more rapidly or comes to its "touching off" level sooner and discharges an impulse, which getting into the specialized tissue spreads to all parts and the premature contraction results. After this phenomenon, there is a post-extrasystolic pause, which is required to build up the energy for the next regular beat. The premature touching off seems to have destroyed the immature potential energy more completely, hence the longer building time, the post-extrasystolic pause, necessary. According to the point of origin extrasystoles may be auricular,

junctional, or ventricular. Interpolated extrasystoles are thrown in in mid-diastole and do not disturb the rhythm at all, that is, there is no long post-extrasystolic pause.

Alternation or Pulsus alternans is a condition characterized by alternate stronger and weaker regularly occurring and evenly spaced beats. It is supposed to be due to the contraction of different numbers of ventricular muscle scrolls at alternate systoles. The sign is evidence of cardiac fatigue and in the slow regularly beating heart is of grave prognostic significance, while in a paroxysmal tachycardia it is negligible.

Paroxysmal tachycardia is an attack of sudden onset and sudden offset coming on more or less frequently. The heart rate rises suddenly from the normal to rates between 100 and 220 per minute. The paroxysms are made of longer or shorter runs of extrasystoles occurring regularly. In other words, an ectopic focus dominates the rhythm. The new focus may be in the auricular muscle outside the sinus node, in the junctional tissues, or in either ventricle. The latter two types are quite rare, the junctional type in two cases seen seemed to be more of a permanent tachycardia. The ventricular type is of very grave significance as it is, so far as known, always associated with coronary occlusion as pointed out in our series of four cases¹¹.

Auricular flutter has been recently shown by Lewis⁵ to be due to stimulation of the auricle by a single and continuous wave, circulating usually around the mouths of the superior and inferior venae cavae. A circular continuous contraction wave at a rate of 220 to 350 per minute, usually 260 to 320 instead of the normal wave proceeding from the sinus node and extending out into the auricular tissue and dying out. The auricular action is rapid and weak. The His bundle does not conduct an impulse to the ventricle, with each action of the auricle, there is characteristically a 2:1 block, the ventricle contracting only half as often as the auricle. The block may be of higher grade or may vary from time to time, producing an irregular ventricular action.

Auricular fibrillation likewise has recently been shown by Lewis⁵ to be related in mechanism to auricular flutter, but different in that instead of the single circus wave, there are circulating sinus waves propagated and revolving perpetually, following varying paths colliding and apparently following the re-entrant paths of least resistance. As a result, the auricle does not contract, however, 450 to 600 impulses are generated per minute and the auricular action consists of fibrillary twitchings with consequent dilatation from engorgement. The His bundle is showered with a great number of irregularly placed haphazard impulses of

varying intensity, the greater of these are conducted to the ventricle. The ventricular action following this type of stimulation is likewise absolutely irregular. Some stimuli come so close to preceding stimuli and are so weak that although they produce ventricular contractions the latter are so weak that the aortic pressure is not overcome, the semilunar valves are not opened and no pulse wave is sent forth. This accounts for a higher heart rate than the pulse rate, the difference is what we term the pulse deficit.

Now having briefly described all the disturbances of the cardiac mechanism, the important ones of which we mentioned as the diagnostic signs of heart disease, we may proceed to the clinical differentiation of these disorders.

We can divide the abnormal rhythms into those that are always and usually regular and those that are always and usually irregular. Sinus bradycardia, sinus tachycardia, bundle branch block and complete heart block are regular. Paroxysmal tachycardia, auricular flutter, and partial heart block are, as a rule, regular but very short paroxysms of tachycardia and irregular or varying blockings in auricular flutter and partial heart block may in occasional instances produce an irregular pulse.

Alternation or pulsus alternans is a regular irregularity presenting no real disturbance in rhythm but merely a difference in force of every other regular beat. Sinus arrhythmia is a periodic irregularity, the waxing and waning rhythm so often associated with deep breathing in the normal youthful heart. Extrasystoles usually disturb the rhythm considerably, occasionally the regular spacing of extrasystoles in bigeminy, trigeminy, etc., gives a sense of regularity to the disturbance. Frequent irregularly placed extrasystoles, especially those of auricular origin, may produce a disturbance simulating very closely auricular fibrillation. Auricular fibrillation is an absolute irregularity in force of beats as well as in rhythm.

DIFFERENTIAL DIAGNOSIS

General observations together with a few simple tests are sufficient for practical clinical differential diagnosis of the disturbances of cardiac mechanism. Following the observation of the rhythm and routine counting of the heart rate and pulse rate, the careful observation of the rate for constancy is employed in every case with a tachycardia. In this test, the apex rate is counted for a full minute at five and ten minute intervals and in different positions with and without vagus stimulation. The paroxysmal auricular tachycardia or any other tachycardia with an abnormal point of origin shows remarkable constancy of rate with variations of not more than two, from minute to minute under various conditions. The tachycardias of sinus

origin show distinct, though often only slight, variations in rate from minute to minute and under varying conditions.

The vagus stimulation tests further differentiate the cardiac disturbances with rapid rates. Pressure on the eyeballs or on the vagus in the carotid sheath in the neck or the Valsalva or Mueller breathing experiments can be used.

Auricular flutter reacts most constantly and characteristically to this test. In this disturbance, the His bundle is very susceptible to vagus influences, which increase its resistance, that is, decrease its conductivity, thus producing auriculo-ventricular block. The two to one block, which is always present, is increased by vagus stimulation and the ventricles may be held in check for thirty or more auricular beats, but the effect is only temporary, lasting for only short periods of 5 or 6 short runs of auricular activity with rare ventricular responses.

Paroxysmal auricular tachycardia may be completely stopped in about fifty per cent of cases, that is, the pulse will drop suddenly from its high level around 240 to the normal rate of about 80 and remain so. If this total effect is not obtained, there is no effect whatsoever, which is characteristic in the other fifty per cent of cases.

Simple sinus tachycardia shows usually only a slight slowing effect. This slowing of the heart slightly or moderately produces the characteristic discrepancy in the minute rates.

The last and most important simple test is that of increasing the heart rate, by exercise, amyl nitrite or atropin. The benign and moderately grave irregularities, as sinus arrhythmia, extrasystoles, and partial heart block, when of low grade and of irregular or mixed type, and even auricular flutter when irregular due to comparatively rare irregular blocking, all become regular when the heart rate reaches 120 to 140 at the most. An irregularity, which persists or becomes more irregular at 130 to 140, is auricular fibrillation.

Alternation, the regular alternate variation in the strength of the heart beat is accentuated, when greater work is demanded of the heart in the increased rate. The sphygmomanometer test with the pressure just below the systolic level will allow to pass only the alternate beats that produce the high systolic pressure, consequently the pulse rate at the wrist is just half of what it is after the pressure is dropped 20 to 30 m.m. of mercury or dropped to zero.

Bigeminy, due to alternate extrasystoles, may show differences in the blood pressure levels, but the normal beats and extrasystoles are not evenly spaced. There is a coupling effect due to the post extrasystolic pause. The bigeminy disappears with exercise, while the alternation is accentuated.

Extrasystoles and partial heart block both disappear at the higher rates. Gradual disappearance of the irregularity with the gradually increasing rate suggests extrasystoles while a sudden doubling or an increase of the rate by a regular factor suggests heart block. The main point, however, in the diagnosis is the presence of a premature heart sound followed by a post extrasystolic pause in the case of extrasystoles, as the rate drops back to normal. In heart block, under the same circumstances, no sound is heard at the apex and the pause is longer, amounting to almost two cardiac cycle lengths.

If the heart rate is 40 or less, heart block is present and if it remains so, unaffected by exercise, amyl nitrite, or atropin, complete permanent auriculo-ventricular block with an idioventricular rhythm is present. If of a high grade partial or temporary complete heart block type, the exercise or drugs may cause a sudden rise to twice, thrice, or four times the rate. Sinus bradycardia is only gradually overcome and the rise in rate is not very great. Furthermore, the rate practically never drops below 50 per minute and is always regular. The presence of any etiological factor, as jaundice, meningitis, brain tumor, or other evidences of vagotonia help to make the diagnosis of sinus bradycardia as much as fever hyperthyroidism, etc., help in differentiating sinus tachycardia.

DISCUSSION

Thus the observations of rate, the vagus tests, and the exercise or drug tests suffice to make bedside diagnoses of the nature of the cardiac disorders. Such being the case, the question of the necessity of instruments of precision, such as the string galvanometer or electrocardiograph of Einthoven will arise. Certain accomplishments and advantages, however, must be recognized. The string galvanometer has made possible the complete analysis of the cardiac mechanism and given us a clear conception of the physiology and pathological physiology of the heart beat. Electrocardiographic tracings make the differential diagnosis absolutely final in all cases.

In certain cases, electrocardiograms are the only means of making a reliable diagnosis. These cases are few, but of importance. In the group of heart blocks the diagnosis sino-auricular block can be established only by electrocardiograms which show the absence of auricular activity as well as the failure of ventricular activity. In the lowest grade of auriculo-ventricular block, that in which there is merely a delayed conduction, we have as the only clinical suggestive evidence a split first sound, a presystolic gallop rhythm, due to the fact that the sound of auricular systole is so

far separated from that of ventricular systole, that the two are not blended as is usually the case. The split first sound is by no means pathognomonic. Electrocardiograms show this distinctly as a P-R interval greater than .17 to .18 seconds. The exact grade of heart block is also best established by electrocardiographic curves.

Bundle branch blocks can be diagnosed only by electrocardiograms, which show characteristic broadening of the QRS interval or delay in the intraventricular conduction and diphasic T waves. There may be a suggestion of this disturbance in the presence of split heart sounds, especially a splitting of the second sound, a protodiastolic gallop rhythm, due to slight asynchronism of the ventricles and consequently asynchronous closure of the semilunar aortic and pulmonary valves. The reduplicated second sound, however, may be present in the absence of bundle branch block.

The point of origin of paroxysmal tachycardia can be definitely established only by electrocardiograms, though suggested by the clinical facts mentioned. When of short or only moderate duration infrequent or frequent and only slightly incapacitating it is usually of auricular origin; when persistent, it is of junctional origin; and when associated with severe persistent angina, shock, and pulmonary edema, it is probably of ventricular origin due to coronary thrombosis.

TREATMENT

The pharmacologic action of drugs on the cardiac mechanism is being analyzed by electrocardiographic means. Lewis⁸ has explained the action of Quinidin, the newest and most spectacular of the drugs used in cardiology. He has shown that Quinidin increases the refractory period of the auricular muscle and thus makes auricular fibrillation impossible. The action of the Quinidin in clinical cases of auricular fibrillation can be best controlled and carefully watched as it passes through impure flutter to normal mechanism. Likewise digitalization may be controlled by observing the changes in the T waves, and by the accurate recording of the ventricular rate.

The treatment in heart disease is a lengthy chapter and cannot be lightly passed over. At the same time, we can merely touch upon a few points in a general discussion of this type.

The differentiation of the disturbances of cardiac mechanism is absolutely essential in the scientific treatment of heart disease. Digitalis cannot be indiscriminately given in one and all types of heart disease. Recent careful studies by McCullough⁹ based on electrocardiographic as well as clinical and pathological observations show that digitalis is contraindicated in diphtheritic heart disease with its widespread acute

myocarditis and conduction disturbances. Likewise in partial heart block, especially in the sclerotic high tension case, digitalis by its action on the vagus and His bundle, increasing the block, may precipitate Adams-Stokes attacks. The patient might die in one of the attacks, or on the other hand, the slow rate of a damaged heart may embarrass the circulation to the point of heart failure because of an inadequate minute volume output. A clear conception of the disturbed mechanism as well as the pharmacologic action of drugs allows one to use digitalis for its diuretic effect and whatever effect it may have on the heart muscle, even in the presence of heart block. In this connection, the use of atropin in 1/50 grain doses once per day, and in any emergency makes safe the administration of digitalis to the point of getting beneficial effects.

The importance of the differential diagnosis of the disordered heart actions that may appear during a surgical operation or postoperatively, and are diagnosed acute cardiac dilatation, is obvious. The patient's life is often at stake or the maintainance of adequate blood supply in a part is essential to the success of the operation. If the paroxysm is one of auricular tachycardia, as it most frequently is, vagus pressure in 50% of cases will yield a spectacular cessation of the disturbance. If the paroxysm is of auricular fibrillation or flutter, rapid digitalization is effective or Quinidin may produce striking results with the establishment of normal mechanism.

Sinus bradycardia, sinus tachycardia, and extrasystoles require no specific therapy. The treatment of any presenting cause is indicated. An ice bag to the precordium is of service in any simple sinus tachycardia.

Auricular flutter and auricular fibrillation yield the most brilliant therapeutic results. Our ideas of these disturbances have been greatly changed within the past few years due to the work of Lewis and others⁵. The idea that the disorder once established, is ever afterward permanent has been modified by two notable exceptions, namely, the discovery of paroxysmal and transient cases, and the re-establishment of normal mechanism by Quinidin therapy in cases of apparently permanent auricular fibrillation.

The action of this powerful new drug Quinidin is explained by Lewis⁶ on the basis of the existence of a circus movement in the auricular muscle about the great vessels, a single circulating wave propagated and revolving perpetually upon a re-entrant path sending out impulses at the rate of 450 to 600 per minute. The mechanism is possible only if (1) a circular path of sufficient length is available, (2) if the

refractory period is sufficiently short, and (3) if the speed of the wave is sufficiently slow. Quinidin prolongs the refractory period and delays the recovery of the tissue, thus rendering the gap between the crest and the wake of the circulating wave shorter and eventually abolishing it altogether and normal mechanism, the sinus node, again resumes control. However, Quinidin slows conduction through the auricular muscle and this prolongs the gap and favors circus rhythm. This latter unfavorable effect acts exactly oppositely to the former or favorable effect, and when the unfavorable effect predominates fibrillation does not stop, but the auricle always slows from 400 to 600 down to 200 to 300, while the favorable effect stops the fibrillation. The rise in ventricular rate, which is quite frequently experienced, and often causes alarm, is due to the slowing of the auricular rate, which is conducive to less blocking. The paralyzing effect of Quinidin on the vagi is also conducive to an increase in the rate of the ventricle, although this is moderated in some degree by a direct depressing effect on the junctional tissues.

Following the methods of Frey³ who has done the most work on this subject, we have used a preliminary test dose of 2 grains (.1G) to guard against idiosyncrasy to the drug. With no evidence of hypersusceptibility the drug was administered in 3 grain doses, gradually increasing to 7.5 grain (.4G) doses three times daily, the period of treatment totaling six to eight days. Occasionally larger doses were used and occasionally the drug was used over a longer period. Our results correspond to those of the many other observers in that in 20 out of 30 cases we were able to re-establish the normal mechanism. Our post-operative auricular fibrillation cases responded most uniformly and especially well when the etiology was toxic goitre or arterio-sclerotic heart disease. Recent cases responded most readily and most permanently. Cases of long standing were more refractive to treatment and more treacherous because of the danger of auricular thrombus formation during the long period of stasis. If there are any signs of cardiac failure, the patients should be thoroughly digitalized and, after suspension of the digitalis for ten days, Quinidin may be effective.

In cases in which auricular fibrillation has been established for some time, and where there are mechanical factors, as mitral stenosis, which tend to precipitate fibrillation, the disorder is often refractive to Quinidin. Even when Quinidin therapy is successful the reestablished normal mechanism is often of only short duration. Quinidin cannot be given continuously because it produces myocardial weakness. In spite of

the fact that normal mechanism is the most conservative, it is a question whether Quinidin is advisable in these cases in preference to digitalis.

Quinidin therapy is still in the experimental stage and not yet ready for widespread uncontrolled and indiscriminate use, for its administration is not entirely free from dangers. In recent especially post-operative hyperthyroid case the danger is least. Eventually it may be one of our most reliable and safe drugs. The intravenous use is not justifiable in the light of accompanying dangers. Cases presenting electrocardiographic evidence of defective conduction do poorly and sometimes terminate fatally quite suddenly. The danger of embolism from fragments of intra-auricular thrombi that have formed during the stasis and break on the re-establishment of normal auricular contractions, has been pointed out by Mackenzie and Orr⁷, Benjamin and V. Kapff, Ellis and Clark Kennedy⁷.

The striking and reliable effects of digitalization in auricular fibrillation and flutter are established facts. The type of digitalis preparation used, the method of administration, the dosage, and the criteria which determine the further management of these cases, warrant some discussion.

It is preferable to have a standardized digitalis preparation assayed by the Cat Method⁴. The Cat Unit being the weight of dry drug in milligrams, which is required to kill one kilogram of cat when the solution is slowly and continuously injected intravenously. High grade specimens of digitalis when not assayed by the Cat Method may be regarded as having an average activity of 100 mg. to the Cat Unit, but not more than 75% of the calculated total amount should be given in the first three doses. Likewise when the patient's weight is not obtainable, due to his poor general condition or generalized edema, estimations of the true body weight are to be made as accurately as possible and not more than 75% of the calculated total amount should be given in the first three doses.

The average total amount to be administered by mouth to man is 0.15 Cat Unit per pound of body weight. The calculation of the average total amount of the drug is then made according to the formula for the type of drug used².

Grams of powdered leaf in total amount =
Cat Unit x 0.15 x Weight in Pounds

1000

Cubic centimeters of tincture in total amount =
Cat Unit x 0.15 x Weight in Pounds

100

$$\text{Cubic Centimeters of infusion in total amount} = \frac{\text{Cat Unit} \times \text{Weight in Pounds}}{100}$$

With a standardized preparation, the average total amount for a man of 150 pounds is 2.25 grams (34 grains) of the powdered leaf, 22.5 c.c. (4.5 fl. drams) of the tincture or 150 c.c. (5. ounces) of the infusion.

Pardee⁹ gives a simpler method for estimating the amount of the tincture, which is the most widely used and most generally satisfactory preparation. He advises calculating on the use of 2 minimis of standardized tincture per pound of body weight. For the man of 150 pounds this would allow 300 minimis or 20 c.c. (4 fl. drams) of the tincture.

The method of administration of the total calculated amount is the next important point. Robinson¹⁰ reported the use of the drug in a single massive dose with demonstrable clinical results, as early as three hours after the administration and always within 18 to 24 hours. For experimental purposes the single massive dose is advisable, but it is not entirely free from dangers. Eggleston's² methods are safer and very effective. When the patient has received no digitalis within the preceding ten days, in urgent cases $\frac{1}{3}$ to $\frac{1}{2}$ of the total calculated amount is given in the first dose. After six hours $\frac{1}{5}$ to $\frac{1}{4}$ of the total amount, after the second six hours $\frac{1}{8}$ to $\frac{1}{6}$ of the total amount and every six hours thereafter $\frac{1}{10}$ to the calculated total amount until maximum digitalization. In non-urgent cases $\frac{1}{4}$ of the calculated total amount at each of the first two doses six hours apart and thereafter $\frac{1}{10}$ to $\frac{1}{8}$ of the calculated total every six hours until effect. If the patient has received digitalis within ten days and there are no evidences of effect, the total amount should be reduced to 75% of the total calculated amount. If there are evidences of partial digitalization it is safest to use not more than 50% of the total calculated.

The signs of digitalization are similar to those of slight digitalis poisoning. In auricular fibrillation, the auricular activity is not affected but through its action on the vagus the His bundle conduction is greatly reduced, so that only the stronger impulses at less frequent intervals are conducted. The ventricular activity is slower, more regular and more effective, so that with each ventricular contraction the aortic valve is opened and the pulse comes through to the peripheral arteries. The pulse deficit disappears, that is, the apex rate and the radial rate becomes similar, which is one of the results sought in digitalization. The drug is continued further until the apex rate is about 75, at which rate it should be maintained continuously. Nausea and vomiting after digitalization has

been under way for some days; a fall of the heart rate to 60 per minute or lower; and the appearance of frequent extrasystoles or a coupling due to bigeminy are signs of adequate digitalization and indicate a temporary discontinuation of the drug.

Digitalis therapy must be kept up in all cases of fibrillation. After digitalization, a patient will lose the digitalis equivalent of 20 minimis, 30 to 40 drops, of the standard tincture per day. Consequently, to keep a patient digitalized with a heart rate at 75, he must receive this amount of drug daily. The effects of the calculated total amount are dissipated within a week to ten days, and therefore the small doses must be begun soon after digitalization. Thirty drops each morning or ten drops of the tincture t.i.d. are continued. After a week or so, the patient may again experience nausea, the drug is again temporarily withheld, and the dosage dropped to twenty drops of the tincture per day. The heart rate at the apex must be frequently counted as an index of effective therapy, which should keep it at about 75 per minute.

Along with the specific therapy, the general measures are most important, as Dock and others have long maintained. Rest in bed in Fowler's position, with morphine in full doses to promote sleep and complete relaxation are necessary adjuncts in the treatment of heart disease. A limitation of the fluid intake to 1000 c.c. (5 glasses) is of value especially in edematous cases, together with a low protein salt poor diet; all of these requirements are met by the Karell diet of 800 cc. (4 glasses) of milk only per day. An increase in the fluid output also aids considerable in cases of heart failure with edema. This can be done by the Hay concentrated salts method in which 5 to 15 grams ($\frac{1}{2}$ to 1 ounce) of Glauber's or Epsom salts, in not more than a half glass of water, are administered three times daily for five to seven days. Diuresis by theocin .2 to .5 gm. (2 to 7 grains) for three doses at three hour intervals in edematous cardiac cases that have had digitalis has been proven to be effective by Christian¹.

Massage, passive movements, resistant movements, and graduated exercises are rational methods of preparing a convalescent cardiac case for getting up and about and eventually back to work.

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EPIDEMIC ENCEPHALITIS*

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The individual symptoms of epidemic encephalitis are not new. They are classic in our knowledge of medicine. However, the symptom-complex and other clinical phenomena do not adapt themselves to the ordinary phases and progress of similar disorders, and this, together with the suspected epidemiology, permits us to speak of epidemic encephalitis as a new disease.

The characteristic features of the symptom-complex in a typical case arise out of the cranial nerve area of distribution. These nerves have their origin in the basal ganglia, mid-brain, pons and medulla. The pathology as it appears in these parts is not new in its elementary characteristics. The only distinguishing feature of the pathology is that its intensity in the typical case is circumscribed in the parts of the brain mentioned.

What we know of this disease is not a textbook matter. Many of you have in mind, from your medical journals and from your contact with the disease, the data here presented. However, it is a matter of value that we at times review and discuss the things we have in mind and therefore I present this paper without apology.

My information comes from personal experience, case reports, and the current medical literature on the subject extending back over a period of about four years.

The following sources of information have been used: The Journal of The American Medical Association, Archives of Internal Medicine, The American Journal of The Medical Sciences, Journal of Laboratory and Clinical Medicine, Journal of Experimental Medicine, Medical Science—Abstracts and Reviews

*Read before the Section on Medicine of the Indiana State Medical Association at the Indianapolis session, September, 1921.

—Oxford Press, Archives of Diagnosis, Medical Clinics of North America, Modern Medicine, Archives of Neurology and Psychiatry, Brain, Boston Medical and Surgical Journal, Progressive Medicine, Bulletins United States Public Health Service, Bulletin of The Johns Hopkins Hospital.

HISTORY: Inasmuch as we have allowed ourselves to speak of this as a new disease, let us go back into the history of medicine and see if diseases of a similar type have been described. There is evidence that, almost in the antiquity of medicine, Hippocrates described a type of disease simulating epidemic encephalitis. In Northern France five hundred years ago there was the "Picardy Sweat" characterized by great prostration.

In 1485 a type of illness appeared in London which, in three months, spread over all England. This epidemic followed closely upon the invasion of England by soldiers from the North of France. Five other English epidemics occurred down to 1551. Some of these were especially severe, showing a mortality of fifty per cent. in some communities. People in all stages of life were stricken. It was not until this last epidemic that we have anything like a fair description of the disease. It is mentioned as of sudden onset, a sense of apprehension, shivers, chills, vertigo, pains in the neck, head and shoulders, prostration, sweats, fever, sleep; and fatal in two or three hours or a day. If the patient survived the first day it was assumed that he had fair chance of recovery.

In 1529 an outbreak occurred in Hamburg following the arrival at that port of the crew of an English ship. From Hamburg the disease spread over Central Europe, following the lines of travel.

In 1889-1890, following an epidemic of influenza in Northern Italy, Hungary and Central Europe there was present a disease of the encephalitis type.

In 1917-1918 epidemic encephalitis was reported from England, Central Europe, Australia, North and South America and Africa. Did the extensive troop movements of the World War have anything to do with this fairly world wide distribution?

Since the World War, epidemic encephalitis has been recognized generally. The first satisfactory recognition and description was by Economo of Austria in 1917; and it was he who put into medical literature the name lethargic encephalitis, but this name is now being superseded by the better one—epidemic encephalitis.

ETIOLOGY: An encephalitis may occur in the course of many infectious diseases, but this type of encephalitis is a secondary condition attending or following some other well defined clinical disease. Epidemic encephalitis is a

disease entity. The clinical phenomena and symptom-complex are not secondary to any other well defined or predominating antecedent infectious process. It is true that the infection must find entrance to the body, and this likely occurs through the mucous membrane of the upper air passages, but this antecedent condition is insignificant as compared with later developments.

The evidence at hand indicates that the disease is not due to any of the well known infective agents or their toxins, and no etiological bacterium has yet been isolated. Some very valuable work has been done and it may be that the problem is well toward being solved, but as yet the results are not conclusive. Emulsion of brain tissue from fatal cases has been injected into rabbits, intracerebrally, producing characteristic symptoms and pathology. From rabbits the disease has been transmitted to guinea pigs and monkeys. The filtrate from brain emulsion will produce the disease if injected (in the rabbit) into the eye, sciatic nerve sheath, or when applied to an abraded nasal mucous membrane. The disease is not produced if these injections are made subcutaneously, intravenously, or intraperitoneally, or if inoculation is attempted by way of the trachea or stomach. Characteristic symptoms have followed inoculation with emulsion of naso-pharyngeal mucous membrane, and also by inoculation with the filtrate from such emulsion.

The disease is no doubt transmissible, but in what manner is not as yet well understood. By some observers it is believed that the virus is persistent and may be distributed by convalescents, or that attendants may become carriers without themselves showing symptoms, and that masked or abortive forms may be an equal or greater menace. The most likely primary focal area is the nasal mucous membrane, and the secretions from these parts are therefore the most likely sources of transmission early and late.

Data on epidemiology indicate a prevalence of the disease in the late fall, winter, and spring months. It is unusual for a second case to occur in the same family.

PATHOLOGY: The pathology is fairly distinctive and characteristic. However, the individuality of the disease from a pathological standpoint is not determined entirely by the character of the pathology but also by the circumscription of its intensity. This intensity occurs in that part of the brain embracing the optic thalami in the fore-brain and the cranial nerve nuclei in the mid-brain, pons and medulla. Not all the pathology is confined to this area. In all cases it is wide spread to a greater or less degree, and sometimes seriously invades the meninges cortex or cord.

Macroscopically the appearance is one of vascular congestion with hemorrhages into the white matter. These hemorrhages are petechial and sometimes larger. There is edema, and the brain tissue is more soft and doughy than normal.

Microscopically the small hemorrhages are brought out more clearly. There is cellular infiltration of the vessel walls into the perivascular spaces and into the white matter; proliferative changes, endothelial and interstitial, and degenerative changes in the nerve cells and nerve sheath.

The infiltrating cells are in the vessel walls, massed about the vessels in the perivascular spaces, and more sparsely scattered through the white matter. In some cases these cells have a tendency to group themselves about the gray nuclear areas, but these areas are not usually invaded.

The spinal fluid is clear and shows usually a normal pressure, a normal or only slightly increased cell count, negative luetic and negative culture tests. The pressure and cell count will vary in different stages—being higher in the earlier stages when the acute infectious process is most active.

The blood shows a moderate leucocytosis and negative Wassermann.

Culture tests in nerve tissue and in various other tissues show negative results.

The intraocular findings are usually insignificant.

The gray matter of the nerve nuclei being usually not invaded, then why the deluge of profound symptoms that we sometimes see that are referable to disturbed cranial nerve function? It has been suggested that the symptoms arise from or are accentuated by the mechanical conditions that are caused by the pathology in the brain stem. The lesion in the white matter gives rise to pressure due to perivascular extravasation, edema and sometimes hemorrhage; and the nerve nuclei are easily affected by these combined pressure factors on account of their intimate admixture with the white matter in the brain stem.

The brain stem is not only the location of the various ganglionic nerve nuclei mentioned but through it pass all the conducting paths that come from the whole body in the spinal cord. Therefore the pressure factor of the pathology may have some influence on the manifestations in distant parts of the body.

CLINICAL PHENOMENA: Function derangement may be anything from a mild disturbance to a complete loss; different cases may vary widely in predominant symptoms; and the individual case will nearly always present distinctly new features as it develops.

Aside from the cranial nerve symptoms there may be hallucinations or delirium, suggesting a lesion of the meninges or cortex; or certain types of pain pointing to involvement of the posterior gray matter of the cord; or certain types of paralysis pointing to involvement of the anterior gray matter of the cord.

From a bedside study we will find that a majority of the cases have a prodromal period of a week or two characterized by asthenia, and in the latter part of this stage by diplopia, ptosis, and drowsiness. Other early symptoms may be headache and vomiting, which are likely toxic as may occur in any infectious disease. The diplopia will likely disappear in a week, but the ptosis continues; the drowsiness deepens into lethargy, and to these symptoms may be added a few or many of the symptoms that may arise out of the pathology described. This period may last from two to six weeks. The convalescent period may last over many weeks or months, and during this period the patient should have the most intelligent care and management.

It is difficult to evaluate the symptoms by any method of classification or enumeration, but to get a comprehensive view let us enumerate them as: (a) General symptoms: asthenia, drowsiness, lethargy (sometimes insomnia), stupor, coma, sweats, headache, vomiting, shivers, chills, fever, pains in the head, neck, arms and sometimes in the lower extremities. (b) Mental symptoms: restlessness, apprehension, hallucinations, delirium. (c) Motor symptoms: photophobia, diplopia, squint, nystagmus, ptosis, facial paralysis, mastication paralysis, tongue, throat and laryngeal paralysis, heart and respiratory disturbances, coarse tremors, choreic movements, spasticities, clonus, convulsions, ataxia, fecal and urine retention. (d) Sensory symptoms: various pains in the head, neck, arms and legs.

In the enumeration of these symptoms an effort has been made to cover fairly well the whole field of symptoms as they may appear in a series of cases taken collectively. Of all these, those appearing most uniformly are lethargy, diplopia, and ptosis—perhaps in seventy-five per cent. of the cases. The other twenty-five per cent. will tax our diagnostic skill. The predominant symptoms in these may strongly suggest other diseases, meningitis, brain tumor, poliomyelitis, etc., but if proper appreciation of minor symptoms is taken in such cases, and they are studied in relation to pathology we will arrive at a working diagnosis.

To make a more concrete picture of epidemic encephalitis I cannot do better than give the history of a case now under my care since January this year. This case is as typical and

presents as wide range of symptoms as any we are likely to see.

Mr. S., age 34, foreman in Stationary Manufacturing Co. History negative, venereal infection denied, blood Wassermann negative.

Jan. 22d, 1921, came to my office. General attitude and appearance of fatigue, slightly drooped eyelids and expressionless countenance. Had been seeing double for a day or two, eyesight slightly blurred. Five days previously he had slight nausea one day, not persistent. For a week he had been unusually fatigued, lying down immediately on reaching home. There was no pain of any kind, and was not during his whole illness. He took to his bed Jan. 23d and did not leave it for two months. He took no solid food for seven weeks after the third day in bed. During this time he could not masticate, and swallowed liquids very slowly and with great difficulty. For six weeks of this period he could not articulate any sound and most of the time made no sound whatever. From the latter part of January it was ten weeks before he could change the position of his body or turn himself in bed. He seemed to have no voluntary power in muscle action on account of spasticity. Twelve weeks from the time of taking his bed he was able to walk, showing some spasticity but no static or locomotor ataxia.

Before he took his bed an ordinary dose of magnesium sulphate gave good results, but from that time the bowels would not respond to any ordinary cathartic, but did respond to enemata. By the time he was able to walk the evacuations were without help and have been so since. This was the only symptom referable to the gastro-intestinal tract. The bladder acted normally.

His general symptoms in order of incidence were: nausea, weakness, drowsiness, lethargy, shivers (at night during the second week)—of sufficient intensity to shake the bed), temperature around 100 during the second week, some sweats but not profuse or persistent. The mental symptoms were only a mild delirium during the second and third week. His motor symptoms ran the whole gamut of the cranial nerves and into the long tracts of the arms and legs. These motor symptoms began very early and continued into convalescence.

His symptom-complex embraced asthenia, drowsiness, lethargy, diplopia, ptosis, a general ophthalmoplegia with the flattened out blank expressionless face, inability to talk, inability to swallow anything but liquids, increased respiratory and heart rate, coarse tremors, spasticities, retention of feces.

There was not a full paralysis of any function. The spasticities were a uniform and persistent feature. If an effort was made by the

attendant to open the mouth it was resisted by the masseter. If force was applied to change the position of an arm or leg there was a marked clonic resistance. The legs were in a constant slightly flexed position with the foot in partial extension. The arms were kept in a repose position across the chest in a fairly rigid state, the wrist and fingers slightly flexed. If the arm was lifted by assistance away from the chest it retained the flexed elbow and wrist and would remain away from the body unsupported until replaced by the attendant. Any voluntary motion that might be attempted by the patient was attended by a marked aggravation of the coarse tremor. The reflexes were all sharp during a period of four months. The diplopia disappeared within a week. During the next five weeks the grossly manifest cranial nerve symptoms disappeared and with them the lethargy. The spasticities disappeared in another five weeks. In four and a half months after the beginning of the illness light work was begun; but at this time, nine months, he is not able to carry the full load and there is no evidence to indicate when he will. The general body functions are good. There is now no objective evidence of the disease except a slight tic in the muscles of the left cheek.

DIAGNOSIS: This case presented no difficulties. It presented the cardinal symptoms: asthenia, diplopia, ptosis, lethargy. With these symptoms alone a diagnosis is justified—even with the mildest ptosis. One case coming under my care had no demonstrable diplopia but had the weakness, lethargy and a very mild ptosis without any other symptoms and was afebrile. He could easily be aroused but immediately went off into his lethargy and continued so for one month day and night.

The diagnosis must rest on some evidence of involvement of some part of that area of the brain which embraces the cranial nerve nuclei. This evidence may not be the predominating part of the clinical picture. Meningial, cortical or cord symptoms may be confusing. A case seen in consultation was at the time apparently one of general toxemia. There had been a temperature of 103 which had fallen to 100. He did not seem especially sick. Was dressed, lying on a cot. He had at times a mild delirium, more pronounced at night, and had trouble in sleeping. When approached in conversation he was rational. The diagnosis was determined by a later development of typical lethargy.

Another case seen in consultation could be termed acute paralysis agitans. It was in a man of such age as would be liable to this disease. The symptom-complex was typical of paralysis agitans but had developed rapidly and had a very early fatal ending, as one would consider mortality from paralysis agitans. I could not

keep from my mind the probability of the symptoms being a corollary to the main proposition of epidemic encephalitis.

In differential study there would come to mind, botulism, syphilis, poliomyelitis, brain tumor, cerebro-spinal meningitis, tubercular meningitis, uremia, alcoholism, hysteria, and conditions secondary to the ordinary infectious diseases.

The general diagnosis will call for a study of the following: (a) A usually short prodromal period in which may appear an upper air passage infection—also such symptoms as may appear with ordinary infectious conditions. (b) A characteristic phase in which may appear the classic symptom-complex, or a modified symptom grouping, or a decidedly confusing grouping of clinical phenomena that will challenge our best skill in differentiation. (c) Laboratory findings: blood count, spinal fluid tests, Wassermann and culture tests.

PROGNOSIS: By observers having to do with a number of cases the mortality is reported from nothing to forty per cent. The average is likely twenty. If the patient survives the early toxic stage he has a good chance for recovery. The two factors in mortality are the early toxemia and the affection of the vital centers in the medulla. Concerning the after non-fatal effects we will know more as time goes on and more convalescents are studied and reported upon.

This disease is an infectious process which may lead to a greater or less degree of fibrosis, both endothelial and interstitial, and to degenerative processes in nerve tissue. For this reason may we not expect to deal later with certain sclerotic processes, or some types of dementia or some types of chorea? The disease may produce an endocrine imbalance. Will this adjust itself?

I have seen but two cases showing after effects: The one reported, showing objectively only a slight tic spasm of the left cheek. This man tells me he is much deficient in endurance and cannot get the same interest and initiative in his work that he did before his illness. His mental processes are clear. Another case: A man, 36, never seriously ill, attack epidemic encephalitis Dec., 1919. First three days hallucination of a man in a lake trying to climb on floating log and never succeeding, no sleep these days, afterward lethargic five weeks, worked every day as shipping clerk in a paper house, at times while working walked into objects and against the wall on account of lethargy. He has been able to sleep but very little at night and none during the day since the lethargy left him. He goes to bed and after a half hour of restlessness lies awake the rest of the night in a fairly quiet condition with no

special brain activity and without pain or distress. He came to me in March, 1921, presenting a general "let down" appearance. He complained of general fatigue and had some aching distress in the back of his head. His mentality was clear, the reflexes normal. He had been taking iodides, veronal, and trional. With 15 grains of the hypnotic he could sleep. The iodides were discontinued, the hypnotic reduced and finally omitted. At the present time, twenty-one months since the beginning of his illness, he is sleeping three or four hours a night. He has no pain or distress of any kind. His attitude is one of lessened interest in his environment. His mental processes are clear. His endurance is much deficient—not able to work.

TREATMENT: The treatment resolves itself largely into a question of management. In some cases in the earlier stages the nervous system is in a condition of stress and excitement—in most cases the condition is the opposite. In either type there must be an environment conducive to the minimum of shock to an already damaged nerve structure. The lethargy is not necessarily evidence that the nervous system does not receive impressions but rather that it does not voluntarily respond. Therefore in lethargic cases further damage may come from an irritative environment.

It is very necessary that there be a sensible understanding of the condition by the friends, a proper type of nurse, a subdued light and plenty of fresh air in the sick room, a nutritious and easily digested diet, plenty of fluids by the stomach, warm baths, proper bowel elimination and a limited drug therapy.

Several remedies have been used—hexamethaline perhaps more than any other, watching the kidney effect. Hexamethaline does find its way into the body fluids.

Serologic work has nothing definite to offer. However, it is shown experimentally that the injection of encephalitis virus into the eye of a rabbit, or the application of the virus to an abraded nasal mucous membrane will produce the disease; but will not do so if the rabbit had previously been given a subcutaneous injection of virulent brain emulsion. The serum of rabbits immunized by subcutaneous injection gives no protection to other rabbits against injections of virus into the brain. Neither does the serum of recovered monkeys or of recovered human beings have any protective action in rabbits. The serum of monkeys recovered from poliomyelitis does not protect against encephalitis, nor does the serum of encephalitis protect against poliomyelitis.

A matter of paramount importance is that the family and friends (and the patient as far as possible or advisable) shall have a proper

understanding of the disease and the course it is likely to pursue through a period of many weeks or months. In this way only can that proper cooperation be secured which is so essential in carrying out the plan of management.

DISCUSSION

DR. CLAY BALL (Muncie): I wish to mention the so-called mild or abortive cases, in which there is no localizing disturbance, when you find no cranial nerve pathology to help you in the diagnosis and the constitutional symptoms are your lone symptoms. You have early a slight febrile reaction, with a little lethargy, which is profound and lasting. This lethargy is too profound to be attributed to any toxic condition of which we are aware. The patient does not seem to be sick, he is ambulatory, and the lethargy is out of all proportion to the constitutional symptoms. That is one thing which has impressed us with the thought that we have met something new. These ambulatory cases, from the standpoint of public health, are frequently the worst cases, for they are the hardest to isolate. You ask if it is necessary to isolate them. Certainly very little has been said about this, and we know that the contagious element is very small, but basing our idea on what we know of other infectious and contagious diseases it seems that we should isolate these patients. If we do not isolate we do nothing. Flexner has called our attention to this and many states require that they be reported.

There is another class, the severe type of the fulminating type, which attacks the patient very abruptly. I saw one patient with one of the leading neurologists of the state, and he died within a few hours. Another case, after four or five days in convulsions, finally got well. This man had two spinal drainages and on regaining consciousness proceeded on his way to health. I cannot say that the spinal drainage had anything to do with his recovery, but it is at least a coincidence. Other men have noted this fact.

DR. GEORGE F. BEASLEY (Lafayette): We had an epidemic of this disease in my town in 1872, and called it "spotted fever." The head would draw back and there was a curve to the back. I started in with bromid of potassium and it did no good. I remembered I was taught that in inflammation of the serous membranes you should give opium until you produce an effect, so I started in with a little, about one-twelfth grain, and the only relief the little patient could get would be for his big brother to sit alongside of him and keep a pressure with his hand on his head. The only thing he could keep on his stomach was crude opium. Morphine had no effect. I finally ran it up to

one grain, then to two grains, and told the parents to give it every hour until he was easy. Then I said, "The old lady will probably give him too much and he will die, but at least he will die easy." When I came the next morning I did not see any bed hanging on the fence, as they always did in those days when anybody died, and when I went into the house the patient looked up and said, "Good morning, Doctor." I asked how many powders they had given him, and the mother said that they gave him two teaspoonfuls at midnight. A week or two afterwards I read an article by Jacobi in which he said to give opium until you get an effect and then I felt better. Since then I have given such patients opium, kept the bowels open by enemas and by salines, but have never put an ice pack on the head.

DR. CHARLES F. NEU (Indianapolis): It is a source of gratification to find this subject brought before this section. The condition is serious from a number of standpoints. First, because of the insidious onset in so many of the cases. Second, because of the difficulty in diagnosis. Third, because of the inability to carry out any definite line of treatment. Fourth, because of the serious after-effects. While it is true that a great many cases in their onset are acute and definite, in that you have definite loss of function of certain activities of the nervous system, such as cranial nerve paralysis, as has already been referred to, there are other cases in which the symptoms are not so definite. It may be said that there is not a symptom manifested in this disease that does not occur in other diseases of the nervous system—that there is nothing pathognomonic. There are certain things that make the diagnosis suggestive, but taking the symptoms individually there is nothing pathognomonic, and the difficulty in the treatment is in not knowing the cause. The filterable virus has been isolated and inoculated with reinfection, but no definite isolation of the bacterium or animal organisms, such as we are able to isolate in tuberculosis, etc., has been accomplished. The diagnosis has to be made by elimination. You have to eliminate other causes and fall back on epidemic variety unless you have the definite symptom-complex to start out with. The particular group of symptoms that is manifested depends upon the particular part of the nervous system that is predominantly involved. In many cases there are mental symptoms which are predominant—sleeplessness, delirium, hallucinations, and even definite psychoses, such as mania and paranoid conditions, may be the predominating signs.

DR. CHARLES D. HUMES (Indianapolis): I wish to say that the great number of cases I see do not come to my attention until after the toxic

effects have worn off. I have seen them after eight or ten months still manifesting the choreiform movements, partial paralysis and mental disturbance. I think rather than try to make many classifications of encephalitis we should classify them under one head. I wish to repeat what has been said that any symptoms which occur in any organic neurological case can appear in epidemic encephalitis. No examination is complete without a most minute study of the fundi, the visual fields, and the serology. I have in mind a case which I studied with Drs. Neu, Whitaker and Eberwein, where the man had stupor, ptosis, partial rigidity of the pupils, mental defect, and asthenia. *The fundi were quite normal but he had a complete left sided hemianopsia and the postmortem revealed a mixed cell sarcoma of right brain.* I mention this because in our efforts to diagnose from a few symptoms we should explore the whole neurological field.

DR. L. D. CARTER (Indianapolis): There is one point I would like to emphasize and that is the value of spinal puncture in the acute stage of the disease. In the treatment arsenic is the only drug that seems to give any benefit, but in my cases I think the ones in which we have used complete and frequently repeated drainage of the subdural space have probably gotten along better. The spinal fluid findings are not characteristic. There is occasionally an increase in the cells and in globulin. The amount is not much increased. On puncture it first comes with a spurt and then settles down to a steady flow, showing that there is not an actual increase in the fluid, but a swelling of the brain and cord, with pressure on the subdural space. I have cases who have suffered from this disease two or three years ago and who still show disturbances, either motor, sensory or mental. The prognosis is difficult. I think complete recoveries are rare. There is almost always some residue for months or years after the attack.

DR. ALBERT E. STERNE (Indianapolis): I do not believe that there is such a thing as a primary nervous disease. To my way of thinking the nervous system is practically always secondarily affected. As long ago as 1835 or '40, Semerling called attention to the fact that the pathology of "poliomyelitis acuta" lay in the vascular system primarily. Many years after this, von Leyden called attention to the fact that certain clinical syndromes were found, which formed clinical and pathologic related entities. Von Leyden showed that true bulbar palsy, subacute bulbar palsy, chronic poliomyelitis, commonly called "progressive muscular atrophy" and the form associated with amyotrophic lateral sclerosis were one and the same thing; but different segments of the nervous system are

involved, and therefore there are certain differences in the clinical manifestations of disease, but they are essentially the same thing.

Let me emphasize that you cannot ever rely on any single symptom. Probably all of us have been impressed by the fact that there is a distinct resemblance in cases of epidemic encephalitis all the way through, to certain well known medical pictures, which we have seen for many years in the more isolated forms and in epidemics such as we saw, the older ones of us, after the influenza epidemics of 1890 and '91. Especially in the one of 1890 the nervous system was extremely involved. The association of nervous symptoms along with certain manifest infections, a certain selective action on the neuraxes which is taken by certain unknown invading agents, such as we see in poliomyelitis cases, is not at all uncommon. This selective action is clearly demonstrable in epidemic encephalitis, but the disease must first of all be considered a general constitutional infection. The central nervous system is secondarily involved by way of the vascular system, the usual mode of invasion, not only in epidemic encephalitis, but in epidemic poliomyelitis, epidemic meningitis and other similar affections.

Undoubtedly many cases have been erroneously classed as epidemic encephalitis; on the other hand many mild or undeveloped forms have been overlooked.

I regard the prognosis as very grave as to complete recovery. A tardy, tedious recuperation must be looked for, even in the most favorable cases.

DR. W. A. FANKBONER (Marion) (closing): I have not much to add, but I appreciate the reception given the paper, and the very intelligent discussion. I think one great satisfaction to an essayist is what he can contribute to general medical welfare. I do not mean necessarily anything new, but if what he says can stimulate a discussion and out of that discussion there comes a reiteration and emphasis of what we already know, or some new suggestions, that is of value.

One of the things that I think needs emphasis is what Dr. Sterne has mentioned, and that is that this is not a local disease. There is no disease of any type whatever that is entirely local in its pathology, in its symptomatology, or in its after effects. So with this disease, the infection must find entrance to the body through some local area, and in some inscrutable way which we do not understand the brain stem later suffers most in typical cases; and, as Dr. Neu has emphasized, the brain pathology is not all of it by any means. The pathology is widespread and in some instances it is not the brain stem but some other part of the nervous system that is most severely attacked.

To me the great interest that comes from a modest effort of this kind is the great value that the study of current medical literature gives us and the great value of the collateral information that goes with the study of any pathological process and the clinical phenomena arising out of it. It is not that one has written a paper and presented it, but that through such an effort some benefit has come to our honorable medical profession.

SOME PROFESSIONAL SHORT-COMINGS*

WILLIAM A. HOLLIS
HARTFORD CITY

I wish to thank you for the honor of having made me your Chairman for the year just closing. I realize it is my duty and a privilege, as such, to fulfill that obligation as best I may and to bring to your minds topics that are not new to you, but which to me seem worthy of consideration. There are problems, other than those of scientific interest, that confront us as medical men.

I shall not attempt to solve them alone, but will cooperate with you, now and always, for the betterment of our profession and its honorable recognition by minds that are yet in the grasp of pathies and cults.

CHIROPRACTIC

Like Knighthood, which was once "in flower," chiropractic is now "in full bloom." All other cults have gotten their vertebrae out of "alignment" and their nerves "impinged," for the time being at least.

Who would have thought, a few years ago, that such a hoard of uneducated craftsmen, with only a few weeks of training, could develop into such automatic puppets, working so harmoniously and in unison with the brains of their promoters? There should be a lesson in this to us. As soon as the petals of this flower have fallen, other varieties will be budding.

If people will fall for, and become enthusiastic over, a fantasy, how would scientific truths appeal to them if presented properly? If the success of such an organization depends upon a few shrewd, well paid propagandists and advertising managers, why cannot we adopt a similar method of influencing the minds of the masses?

We have learned the lesson, in this State, at least, that legislation does not control. We can do very little, working alone, to influence public opinion. Our disgust for the cult sometimes brings us into conflict with the mind of a faithful disciple, and we get no further in the end

than a tirade upon this individual for being such an intellectual nonentity. Nothing is accomplished by such antagonism.

"The public press is a moulder of public opinion, and if the regular medical profession had taken advantage of the public press in making the public acquainted with the accomplishments of scientific medicine, the public would not today be suffering from the effects of so much quackery and charlatanism."—(*Jour. Ind. Med. Assn.*, Sept., 1921.)

The propaganda and reform department of the A. M. A. should reach further than enlightening doctors about things they already should know. It is the people who should be reached.

We of the medical profession are largely to blame for the situation, and we are the ones who will have to take the initiative in eradicating these pests. How many of you would enjoy practicing your profession in a state where the chiropractors and osteopaths are legally qualified, through their own separate Boards? It is almost unthinkable, but such is the case in Oklahoma just recently. Shades of Æsculapius! our brethren out there must be in a happy frame of mind.

CONSULTATION

Consultations with our medical friends, as a personal favor and for unselfish scientific interest and helpfulness, is one of the splendid ways of strengthening fraternal bonds and learning from each other. We should consider it a high compliment of friendship and confidence to be asked by a colleague to assist in the examination of his patient, that some phase of the situation may be cleared up. You certainly are keeping a friend, and the greatest good is being done for the sufferer. We should never place a financial value upon such consultations. Our medical friends should feel free to consult by phone, on the street, by letter, or call at the office with his patient, without embarrassment or apology. I hold in the highest regard you men to whom I have appealed from time to time for advice and counsel, and which was so freely given. I have in my files a mass of correspondence which has been extremely helpful. As we learn from others, so should we also learn from ourselves. This may be done by taking a serious interest in our work and keeping a check-up on it. Carefully written case records should have been begun long ago and should ever be continued. Do not trust to memory or become satisfied with an easy going routine. Besides the helpfulness to yourself, a most favorable impression is created upon the minds of patients that a genuine interest is being taken in their cases. Nothing is more humiliating than to have to ask a patient what his trouble was or "What we did for you when you were here before." We

*Chairman's Address before Section on Ophthalmology and Otolaryngology at Indianapolis session, September, 1921.

either push ahead or slip backward. There is no professional nor intellectual level. Go back over your old case records occasionally and see how much you have forgotten, how your work has improved, or perchance fallen short. In this way we learn from ourselves.

REFRACTION

There is, sad to say, a lot of eye men who are doing the poorest sort of refraction. For this situation there is no excuse. If they do not know how, they should learn. Take the time, care and interest and charge for it. I know personally a few men, members of our society, who have been influenced so insidiously by the commercial methods of some opticians, that almost without intent and at first reluctantly, they have partly given up the only dependable method of refraction that has stood the test of time in the hands of masters in our profession. It is positively absurd to think of abandoning homatropine, hyoscine and atropine, when indicated, regardless of the age of the patient, because of the whims, caprices and prejudices of the misguided. We may as well compromise scientific medicine with chiropractic. Take advantage of the tirade against it by the pseudo doctor-optician, who is quite often a chiropractor on the side, to do better work and gratify your ideals and convictions with a better and more intelligent class of patients. I have done this and I hope you here today are doing the same.

While there will always be more refraction to be done than there are oculists to do it, and well-trained, conscientious refracting opticians—as well as ignorant pretenders—will be in demand by the masses, the facts remain that ametropia and its results must be recognized and given serious consideration. A vision 20/15 does not necessarily mean that there is a perfect physiological working. Many most serious diseases may be present.

Let us visit and learn from each other occasionally. Call on your professional friends at home and away—see their work and compare your own with theirs. They will be glad to tell you all they know.

By way of digression, permit me to mention a little, but very important, thing I picked up from a friend whom I see before me. I noticed that he used a perforated disc, with an opening about the size of the average pupillary diameter, before the eyes that had been prepared for refraction by cycloplegic. The purpose so apparent, the thing so simple; so essential to clear, sharp central vision. All confusing peripheral rays shut off, as in an eye where the accommodative and pupillary reflexes have not been abolished. From then on, I have done no refraction without it and I get better results.

Try it both ways and convince yourself, to your own satisfaction. This is one example of practical, accidental helpfulness.

SYPHILIS

We should ever keep before our minds, as do the internists and general practitioners, the frequency of syphilitic infections and their complications. Do not work alone in the management of these cases. In the treatment of syphilis, we have learned a lot when we realize that our friends who sent us these cases know more about its management and treatment than we do, as a rule. We know more about its effect upon special sense organs than they, and it is for that aid alone we are solicited. I do not want to be misunderstood as saying that we wash our hands of responsibility by so doing. Lazy, incompetent and conscienceless practitioners are to be found in most all communities, but there are always good men, to whom we owe a debt of cooperation and confidence. Without having needed our assistance, the case would not have been referred to us, and when our work is done the patient should still be in the hands of the one to whom the case rightfully belongs, if he is prepared and willing to continue treatment. In other words, the medical men will have a greater respect for us if we do not administer our own salvarsans, if we can avoid it. Group practice, in this modified form, is practical in every community. We should not and cannot work alone. What applies to the management of syphilis also applies to other conditions which call for aid and co-operation of internists.

TURBINECTOMIES

You here today are not in the class of turbinate barbarians and cannibals. We still have them with us, though; the legalized, mercenary, conscienceless near-quacks, whom we have not been able to reach. They hide themselves and we see only the "works of the devil." How helpless we are and how we pity the poor, innocent victim, the possessor of a wide open nose, dry, scabby or perhaps a fetid ozena, when we behold a nasal septum as crooked as the coast of the New England States and the turbinates destroyed on the false assumption that an air channel must be secured no matter what means employed.

If you cannot do a good submucous resection, for Heaven's sake leave it alone or have someone do it who can.

TONSILLECTOMIES

The tonsil, like the appendix, has been the object of jest, ridicule and scepticism, to a greater or less degree, by both laymen and some physicians. Sometimes it is remarked by a patient that "My doctor does not believe in tonsils"—as though it were a religion or a creed. He may not believe in "worms" either, but that

does not alter facts. I think after all that this influence results in good, for it acts as a check upon our enthusiasm, causing us to stop, look and listen. However, more tonsillectomies are being done than formerly, and will continue to be. But, like the wholesale and reckless sacrifice of teeth, their indiscriminate removal has given cause for a protest of conservatism that is having a favorable influence. We will have to say that, if there is any doubt as to whether or not a tonsil is feeding organisms and toxins into the blood stream, or harboring organisms of a dangerous kind, their removal can do no possible harm, if properly done. To my mind this brings up an important consideration.

How many of you have a definite and reliable technic for any and all kinds of tonsils in this operation? If you have none, it is time you were developing one. At every meeting of the State Society and other gatherings we see a great array of new-fangled instruments for tonsillectomies, or mostly some modification of a freakish device. When we meet our friends at times, as we do here today, among the first question asked is, "What method of tonsillectomy do you use?" Your reply should be, "A strictly surgical enucleation," rather than naming some man in St. Louis, Cincinnati, Kansas City, New York or elsewhere. The whole outfit should be dumped into the rubbish heap as non-essential, fantastic and unsurgical contraptions. There would then be less temptation for the untrained.

We who pose as skillful men in our chosen field, do not always do an ideal enucleation, with a minimum of traumatism and resulting scar tissue, but we should be more dependable than one who does them only occasionally. When we seldom, or almost never, leave a mass adherent to a patch of capsule, or mutilate the pharyngeal pillars, we will have a greater respect from some of the general men who have discovered that they can do cleaner work than some of us. I am sure none of us have any right to complain of any one in general practice doing his own tonsillectomies if he does them well, for he may have discovered that his results are more satisfactory than the surgical colleague in his community.

None of us are 100% perfect. Some of you have seen a fragment of tonsil left by me; I have seen the incomplete work of some of you. Let us be charitable. When such is discovered, do not make it an occasion to create prejudice against the work of one of your friends who, on the whole, may have greater and more dependable skill than his critic.

Don't sit around and worry about the men in other fields who are intruding our sacred domains, without first inspecting yourself. The

fault may be your own. Cut out your general practice and all surgical side-lines, play the game fair and they will support you, almost to the man, everything else being equal. Neither you nor they can succeed well, professionally or financially, with too many irons in the fire. The same may be said of some general surgeons, who do a little of everything because they need the money, as they frankly admit. In the end they do not get it, and I have never seen one of them get far. To maintain their dignity, to keep the confidence and respect of doctors and laymen, is inconsistent in such practice. If you are an Ophthalmo-Oto-Rhinologist, be one; if a General Surgeon, be one.

MEDICAL MISFITS

There are two classes of medical men who are not helpful and are hard to assimilate. They will not cooperate and are an absolute hindrance to progressive medicine. These are the medical broker and the medical croaker. The first is one who is out for gain at any cost, regardless of hardships and inconveniences to fellow-beings. He takes much but gives little. He cares nothing for public opinion in matters of equity and community welfare, or professional advancement; cares nothing for what you think of his methods. He is aggressive, domineering, hypocritical, pretentious and strutting; a friend to your face, a traitor to your back. Meet him in consultation, he is the chief actor, working well up-stage. When you depart, he will remain or return and take advantage of your absence. Meet him alone and he is suspicious. Crowd him into a corner, you will behold a frightened, trembling, apologetic, cowardly crook. Better get him then, or he will try to get you later. He belongs to most of the medical societies, but never attends; does not permit his dues to become delinquent for reasons quite obvious. Avoid him. His selfish ambition has hardened his heart. You are better than he and he knows it.

The medical croaker—he neither hinders nor helps. He would not be missed, yet you wish him no harm. What the majority are for, he is against. You are in the wrong, he is always in the right; never succeeds well and admits it, but it is not his fault; takes no part in discussions at society meetings, but does a lot of barking and criticism in private; makes a great fuss and flurry about weak medical laws and wonders what is the matter with the profession, but does nothing himself but rant.

He is strong on the laymen, but weak on the medical brethren. Belongs to no medical societies—the A. M. A. is a trust; prefers proprietary medical literature to standard medical journals; profane against quackery, but will sign a death certificate for a chiropractor.

Don't be a broker. Don't be a croaker.

DISCUSSION

DR. E. M. SHANKLIN (Hammond): One thing that Dr. Hollis said that struck me particularly is the management of luetic cases that come to the specialist. There are, in Indiana, I take it, a few men who are fully and competently equipped to personally direct the treatment of lues. But there are so few of the Indiana eye, ear, nose and throat men who come under that classification that as a general rule I should say these cases, in all fairness, should be referred to the internist.

That leads to another suggestion: We depend to some extent on referred cases coming to us from the general practitioner, and yet too often are we prone to forget the source from which these cases come. I will refer to just one specific instance. A case is referred to a specialist for a tonsil operation. The routine examination of the patient develops that there is an albuminous condition of the urine. I happen to know that there are specialists who will undertake to correct this condition of the urine, notwithstanding the fact that the case has been referred directly from the family physician of the patient. I believe such practice is wholly wrong. I do not believe that any man doing eye work has a right to undertake the treatment of a nephritis. They should in all instances be referred back to the man who sent the case to you.

DR. O. C. BREITENBACH (Columbus): Only one word with reference to a hybrid that the profession harbors. I refer to the man, who, because of his lack of knowledge of present day medicine, and judging his confreres' ability by his own, apparently in sheer desperation refers his wife or children to a chiropractor in the community when his feeble efforts are incapable of stimulating feelings indicative of returning well being.

I also have in mind that species of practitioner who hovers nigh to the optometrist, seeking his favor, and finds it justifiable to refer eye work to him in hopes that the optometrist will in turn refer nose, throat and ear cases to him.

We come in contact with this individual in every community, and I, personally, feel that the man who has no more regard for the sanctified portals of regular medicine than to allow the pollution mentioned, ought to be a discard of legitimate medicine. An innate sense of self respect ought to hold the legitimate medical man in his own chosen field. The base interests of the optometrist and chiropractor are thus fostered by this individual whose main object in carrying out a public trust should be the branding as vicious the influence of all cults of this description.

DR. C. J. ADAMS (Kokomo): My county society has appointed a Publicity Committee to tell the community what we are trying to accomplish. We are not aiming to fight the chiropractor or the optician, but we are aiming to let people know who and what the medical profession is composed of, and just exactly how much time, work and expense the medical man has been put to to gain his education; just what his ability is and what he can do and is doing. We haven't gotten the thing to working yet. I don't know of any other medical organization in this state that is doing anything of the kind. I believe we are going to chase some of the quacks out of our community.

DR. W. A. HOLLIS (closing): The main idea is to cut out commercialism, be progressive, play fair, do the right thing, and remember that we all live in glass houses; be on the square, practice your specialty, and, as I said, don't try to be a Jack of all trades.

Remember, you have colleagues who are your friends, and they reach beyond the confines of our specialty. We have to work with them, and we can accomplish nothing without their aid.

“THE PHYSICIAN”

MYSTICISM AND SYMBOLISM IN RELATION TO THE HISTORY OF MEDICINE*

By

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A consideration of mysticism, medical symbolism and history suggests to the average physician's mind something very remote and unrelated to the present. His thoughts go fleeting through the centuries to the distant past of the ancient Assyrians and Chaldeans; to the early Egyptian dynasties; or to the less remote medical mythology of the Greeks. It does not occur to him that despite the progress in fundamental science and the practical arts of civilization, the refinement of medical mysticism in those ancient days puts to shame the crude practices and beliefs of our own time. One may learn medical mysticism from the “Medicine Man” of the Black Feet Tribe in northern Montana; or at the annual snake dance of the Hopi Indians in Arizona. It is exemplified in the common buck-eye carried in the pocket to ward off rheumatism; or the mad-stone of famed value when applied to the bite of a rabid animal. Its superstitious influence is apparent daily in the precious stones treasured or the jewelry worn. It speaks powerfully in many who look askance at Friday and the number thirteen, and in the farmer who plants by the signs of the moon.

*Nineteenth of a series of articles by Dr. Wynn which will appear regularly in THE JOURNAL.

These are familiar illustrations of individual customs and beliefs in our own day, showing how deeply ingrained into our inherited natures are the influences of superstition. If more magnificent examples are sought showing systematic and widespread organization in support of mystical healing, one needs but turn to the splendid Christian Science Temples to be seen in every city, where the reality of the senses is in large measure denied; whose "healers" claim divine influences, even alleging cures by "absent treatments." Strange as it may seem at first thought, there is a striking similarity between the ancient Greek Temples of Aesculapius and these modern edifices devoted to mental healing. At one time these temples scattered throughout Greece numbered over three hundred. Like the "healers" of the Eddyites today, they claimed supernatural power. In time of epidemics, the priestess or goddess Hygeia, would come forth, in her hand waving the serpent, emblem of healing, over the multitude. Thus all were blessed and supposedly the afflicted were healed or the well protected against evil influences causing disease. Eddyism, however, is only a poor second edition of ancient Aesculapianism, for the latter whilst assuming the exercise of supernatural healing, wisely sought the aid of natural forces as well. Accordingly the Temples of Aesculapius were located with extreme care, having due regard for the charms and healthful benefits of the outdoors. As the sites of these institutions they sought refreshing groves, the purest mountain air, the most brilliant sunshine; pure lakes and streams and health-giving springs. They were in truth the first Health Sanatoria. From the priestess or goddess (Hygeia) of the Aesculapian temple has come down to us the modern word *hygiene*. Thus it is seen that Eddyism is nothing new, in fact only a reversion to ancient medical mysticism, but without its chiefest virtues.

If study be made of any race or tribe of people in their early evolution it will be found that religion and medical practice go hand in hand. It was true of the ancient Chaldeans, the early Egyptians and the Greeks as it is true of barbarous tribes and healing cults in our own generation. Superstition and mysticism pervade all medical beginnings. A very natural outgrowth of evolving medical mysticism is medical symbolism. A symbol is some material thing which stands for an idea, a principle, a creed. Most symbols typify aspiration for better or more glorious things. Some however stand for baser thoughts and designs, as the saber of Mars betokens a blood-thirsty purpose. The Old Testament scriptures are built upon symbolism. Under the New

Testament regime the Mother Church perpetuated symbolism in modified form and elaborated it to a point where revolt came in Protestantism. The very heart and brain of the Masonic order is symbolism. The human mind is so constituted that it craves representation of its ideas and ideals in symbols.

Since scientific methods have separated to a large extent the mystical from the medical beliefs and practices, symbolism has had small place in medicine. What remains is not to be construed as inconsistent with scientific ideals. As scientists loving the truth we can do naught else than turn with sympathetic interest to the struggles of our profession to emerge from superstition and barbarism. If certain symbols come down to us from the ancient days, let us view them with genuine historic reverence, as representing phases of evolution toward a higher civilization.

The eagle is the most ruthless murderer of inoffensive birds among the feathered tribes. As such we detest and abhor its rapine. But on top of the American flag-pole, as a symbol typifying aspiration and liberty we idealize it. So in medicine, the symbols which tradition, mysticism and history have passed down to us are interesting as standing for the evolution of science; and we may be pardoned for perpetuating them as symbolic of the good and true, from whatever age derived. As physicians it is well that we know something of this symbolism and its suggestive meaning.

Most symbolic representations bear the mark of oriental origin. True they have descended to us through the Hebrews, the Egyptians and the Greeks. The symbolism of the Greeks always had an eye to curved lines, the grace of form, color, symmetry—in a word, beauty. Not so with oriental symbols which stood for an idea, a principle. For example, the ox typified patience; the serpent, wisdom and prudence; the eagle, aspiration.

In approaching the subject of medical symbolism only the briefest references need be made to Greek Mythology. Apollo, the sun god, and worshipped as the god of medicine, is said to have derived the power of divination and healing through the slaying of the serpent Python. Aesculapius was the reputed son of Apollo. Homer records in the Iliad that Aesculapius went upon the Argonautic expedition. So successful was he as a physician that Pluto became envious and complained to Zeus who slew him with a thunderbolt. At the request of Apollo he was placed among the stars. Hygeia was the daughter of Aesculapius and the high priestess of the temples which bore his name. Thus it is shown that medicine had a most noble mythological lineage. It was from this heroic period in early Greek history that most

of the medical symbols sprang into common use, although their origin must be traced in most instances to the Orient.

The most ancient and generally employed medical symbol has been the serpent. If study be made of almost any race of people, it will be found that in their primitive period the serpent appeared as the emblem of wisdom and healing. It was true of the Assyrians and Babylonians, the Egyptians, the Greeks and even the Mound Builders of America. The American Indians of the present day exemplify the same fact in their snake dances. This curious truth would appear to point to the common origin of mankind. Serpent worship prevailed in the Orient. The serpent was considered sacred, and stood for prudence, health and immortality. Its emblematic significance of health and life no doubt came about through the fact that each year it was revived from a state of lethargy and its skin cast off—typifying to the mind of the Oriental seer, return of health, new life, resurrection.

In the birth and growth of the Hebrew religion the serpent figures largely. While in the fall of Adam and Eve it stood for evil, it was not always so. When the Children of Israel were being led out of Egypt through the wilderness by Moses, it is recorded there were murmurings, whereupon the Lord sent fiery serpents among the people, which bit them. Moses prayed for them. Then the Lord commanded him to make a fiery serpent of brass and hoist it upon a pole and directed all those who had been bitten to look upon this image and they would be healed.

It was almost four hundred years after the time of Moses that Aesculapius and his followers dominated Greek medicine. Whilst he, like Homer, is catalogued in the mythological realm of Greek History, there certainly must have been some such medical personage of extraordinary personality and genius. He and his followers initiated the movement which brought medicine out of the darkness of mysticism into the light of scientific methods, under Hippocrates. Their teachings, such as they were, evidently made a tremendous impression upon intellectual Greece—apparent even in Hippocrates himself, as well as in the great philosopher Socrates. In the realm of Grecian Art also, Aesculapius occupied a prominent place. Statues of him decorated most of the temples of healing. The one at Epidaurus is most familiar to us because it was brought to Rome in 292 B.C. to avert pestilence. It remains today in the Louvre as a precious heritage of early Greek art.

From a study of these statues much of our present knowledge of medical symbolism in

early times is obtained. A wreath of laurel is upon the head indicative of the high esteem in which medicine was held. The dog was frequently associated, typifying the watchfulness and faithfulness of the physician. The cock was another significant emblem. On the one hand it stood for sacrifices in the interest of the suffering; and on the other represented the sacrificial offering generally made by grateful patients for their restoration to health. This custom was beautifully shown by the dying philosopher, Socrates, in the following dialogue: "Crito, I owe a cock to Aesculapius; will you pay the debt?" "The debt shall be paid," responded his friend.

Some of the Aesculapian statues represent the extended hand, holding a fir-cone. Like the serpent, this medical emblem is of Oriental origin. The "Tree of Life," from which it was obtained, was sacred and guarded by priests. To the minds of the ancient Assyrians and Babylonians, the fir-cone possessed the power to repel demons and impart "the breath of life."

But most constant of all the Greek symbols of medicine was the Staff of Aesculapius. The story of its origin is told in the Iliad. One day when on the Argonautic expedition, Aesculapius sat in his tent treating Glaucus. A snake entered and entwined itself about his staff, thus endowing him with wisdom and prudence. Ever after it was his constant companion in his labors. The Aesculapian staff adorns the badge of the American Medical Association, and is worthy to be accepted as the world-wide symbol of our profession.

Curiously, almost unaccountably, the *caduceus* or Wand of Mercury (Greek, Hermes) has been permitted in modern times to usurp the place of the Aesculapian Staff as a medical emblem. Its use became so general, especially during the world war, that it appears doubtful if it will ever be displaced. It will be recalled that Mercury was a messenger of the gods—indicated by the wings on the staff. In ancient times the *caduceus* was the badge of neutrality, of commerce and trade—the arts of peace as opposed to the destruction of war. Upon the wand the serpents do not stand for wisdom and healing, but for peace. This is indicated by the traditional story concerning the birth of the *caduceus*. Mercury came upon two snakes fighting, whereupon he smote them with an olive branch received from Apollo. He was surprised to find them cease contention and become friends. If we dared modernize the ancient interpretation of the *caduceus*, very fittingly the wings might typify messages of scientific and spiritual truth from on high; and amongst professional colleagues the serpents might stand for a mutually helpful peace; and on earth good will to men.

A very interesting group of medical symbols should be considered separate from those which have preceded—the talismans and amulets. As we know them, they were the product largely of ancient, oriental mysticism. Few persons realize that many of the ornaments worn upon the body for personal adornment, trace their birth to very ancient mythology. Originally they were worn as charms, supposed to possess magic power to avert evil influences and preserve health.

Talismans owed their birth to astrology. Why should we marvel at this? What a soulless creature is he who in the solitude of night can gaze at the star-lit dome without a thrill of wonderment or the yearning to know and understand it all? With the very beginnings of intelligence in the human race, came the star-gazers. Out of their efforts grew astrology. Even the noted Roman physician, Galen, wrote extensively upon this subject. In time the dreamy mysticism of astrology gave place to the wonderful science of astronomy.

Talismans are astrological charms or stones on which are engraved letters, figures or characters supposed to have great virtue in averting evil or disease. By ancient usage they were made when two planets came in conjunction. Sir Walter Scott in "The Talisman" tells of the "Lee-penny" which is still reputed to have virtue in stopping blood or canine madness.

Quite similar in form and use to the talismans were the amulets, except they were not fashioned under astrological influence. The image of Raphael (healer of God), patron angel of early Christians, was frequently found on both talismans and amulets. Images of the thing dreaded were sometimes placed upon amulets to frighten the real object of fear away. Frequently inscribed upon amulets were certain geometric figures or numbers. Among the Chaldeans the number seven was sacred, and according to their belief possessed a charm to ward off evil influences. The *cruix ansata* was an Egyptian symbol of life, a cross worn suspended from the neck.

Amulet rings were held in high esteem in early times. The Signet of Solomon is said to have played a considerable part in the building of the temple. The Physician's Ring was an amulet prized both for its magical symbols as well as for its stone setting. Sapphire was reputed to shield the wearer from pestilence; coral was supposed to be curative for nervous and mental afflictions; and the opal was considered a stone of evil omen.

Of all amulets the Pentacle or five pointed star is the most ancient and honorable. It was called "Pentalpha" by Pythagoras, whose philosophy was that all knowledge and wisdom sprang from numbers. It constituted the

legendary "Key of Solomon" which has entered so largely into history. Ruskin defined it as the Symbol of the Trinity. Long before the Wise Men of the East followed the lead of the Star of Bethlehem, the Pentacle was thought to have mysterious power. Like the horseshoe in our own day, it was employed to keep off witches, and bring good fortune. It was used as the heading of books written by the early Greek Christians. Goethe makes Dr. Faust place a Pentacle over his threshold to keep out the evil one, yet Mephisto got in. Among both ancient Greeks and Romans it was the symbol of health. Over each of the five arms of the star was placed the letter entering into the spelling of the word Hygeia (Greek) or Salus (Roman). This knowledge of the ancient meaning of the Pentacle, gives new significance to the stars on our national emblem.

In more recent times, it may be mentioned, amulets were issued in the form of "Touch Pieces" by Henry the VII to persons whom he had "touched" for the "Evil." In our own time the "Medicine Bag" of the American Indians is a familiar illustration of an amulet. It is made from the skin of a serpent or animal, and contains secret and mysterious substances, suggested by dreams inspired by the Great Spirit.

So much in brief is the medical symbolism which has come down to us from the far east, more particularly through Greek Mythology and the classical period of its civilization. Contrasting the highly mythical period of Aesculapius with the even more remarkable period of scientific inquiry inaugurated by Hippocrates, one is inclined to ponder what may have been the bearing of the latter toward the mysticism of the preceding ages. I am pleased to find abundant proof of his reverential attitude toward his predecessors. Sweeping as was his search for truth and keen his judgment of error, he yet had the modesty of a finer wisdom. Despite his vast knowledge and marvelous influence he did not arrogate to himself any subtle powers or seek to capitalize the mystical beliefs of the people for his own glory. On the contrary, note the humility of the truly great, when in the Hippocratic Oath he acknowledges a power greater than man and his indebtedness to those who had gone before. If in the Oath he lifts his thoughts toward Apollo the God of Medicine and pays tribute to the Aesculapians, it is not to be construed that he accepted unqualifiedly the medical myths of that period, but that he looked upon these medical symbols in an age of mysticism as an expression of the struggles of medicine to free itself from barbarism and superstition. With tender compassion he looked upon these beliefs and read into them the scientific hope of the future.

In this brief review of medical symbolism may we not have brought to attention one of the strongest attributes of Hippocrates—greatest physician of all time. If he, laboring in an ancient civilization which had been saturated with medical mysticism, was yet able to accomplish stupendous advancement in banishing superstition and establishing scientific truth, may we not learn from his methods and take courage from his action, in laying hold upon similar problems in the present age. And let us not with ostrich-like cowardice, hide our minds from the existence of superstition and mysticism in medical practice in modern civilization when in truth they are found upon every hand. The *nomen* (name) is different but the *numen* (the thing itself) is much like that of old. Marching under the same banner of mystic belief and practice as in the ancient days are Schlatterism, Dowieism, Eddyism, Chiropracticism and the like—a heterogeneous multitude of erratic, misguided, ignorant or venal-minded individuals. As Hippocrates spoke, not with the voice of cynicism, but in the spirit of charity, so let us not without just ground attack the votaries of isms and cults which feed upon medical mysticism. Nor should we allow pride to deter us from stooping to garner the grains of truth from the chaff of their errors.

USE OF DRUGS IN INFANCY AND CHILDHOOD

In order to establish a standardized list of drugs essential to the treatment of the diseases of infancy and childhood, Henry F. Helmholtz, Rochester, Minnesota (*Journal A. M. A.*, Oct. 8, 1921) selected from the pharmacopeia a list of sixty-one drugs. This list he sent to eighty-four men who are limiting their practice to pediatrics, with the request that they check the drugs listed and add to them any drugs which they considered essential in their practice. Of the eighty-four men, sixty-four responded. Only mercury in some form and santonin, on the list submitted, are used by all sixty-four men. Besides these, silver, arsenic, iron, sodium bicarbonate, cod liver oil, and at least one representative of the opium series, the antispasmodics, heart and circulatory stimulants, hypnotics, laxatives, antipyretics, anthelmintics and urinary antiseptics, were used by sixty men of the sixty-four. One-half of the men used forty-three of the drugs indicated on the list. Fourteen added milk of magnesia, and three or more added benzyl benzoate, hyoscyamin, chloroform, agar-agar, creosote, chenopodium, glycerin, and tincture benzoin compound. One man added thirty-eight drugs to the list. The drugs in this list can be readily divided into four groups. The drugs in the first group have specific indica-

On the other hand great injustice would be done the Father of Medicine in assuming that in his treatment of mystic beliefs and cults he shunted duty for expediency. Whilst his wonderful life was characterized chiefly by his zeal in the promulgation of scientific truth, and ethical conduct, he was equally determined in his opposition to sham. Let us not show less courage in the present generation. Never through our own neglect of duty in practice should these sects find justification for existence. Or when once established in the graces of public respect, we should not through a false conception of professional pride, disdain to lay bare by systematic and unrelenting exposure the loss of life which such practices often entail; or the golden opportunities wasted when sane and intelligent medical procedure might preserve or restore health. Altogether too soft has been our treatment of these fallacies. What respect have we for those cloaked in the garb of moral or religious creed who disdain to point to evil practices and fail to seek their reformation? Is not the medical profession perhaps in need of a spiritual awakening—a conversion which will inspire zeal and merciless exposure of medical shams as well as promote the cause of scientific truth?

tions; for example, mercury, arsenic, quinine, santonin, male fern, and so forth, act directly in destroying parasites, and the drugs such as silver, hexamethylenamin and the salicylates, have definite antiseptic powers for destroying bacteria. The indication for the use of these drugs is usually given with the diagnosis of the disease. The drugs in the second group regulate the function of the different organs; for example, digitalis, the group of laxatives, and the diuretics. The third group is essentially for the symptomatic treatment of disease, as morphine for the relief of pain. The fourth group consists of drugs that are used for a specific purpose, and for practically no other, such as phosphorus in the treatment of rickets and spasmophilia, mustard for counterirritation, and phenol (carbolic acid) for the infections of the middle ear. The treatment by drugs of diseases in infancy is influenced in its effectiveness by the factor of nutrition and growth. This is perhaps best expressed by the statement that as long as a child eats and digests well there is a good chance for recovery. A drug which acts favorably on the disease focus but interferes with the nutrition of the child is harmful. The effect of the so-called tonic treatment during the active stage of the disease is another example of the failure to recognize the nutritional factor in disease.

**THE JOURNAL
OF THE
INDIANA STATE MEDICAL ASSOCIATION**

Devoted to the Interests of the Medical Profession of Indiana
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Office of Publication, 406 W. Berry St., Ft. Wayne, Ind.

FEBRUARY 15, 1922

EDITORIALS

A NEW SYNTHETIC LOCAL ANESTHETIC

A few weeks ago a new synthetic local anesthetic, the trade name of which is butyn, was placed on the market after having been approved by the Council on Pharmacy and Chemistry of the A. M. A. While most of us have been well satisfied with cocaine as a topical application to produce local anesthesia, and procaine and apothesine for infiltration anesthesia, yet we are always pleased to find something that is either better or does away with some of the objections to these preparations. According to the report concerning clinical and experimental use, butyn is noted for the striking rapidity of its anesthetic action as also the depth and completeness of anesthesia produced in the average case, when used as a topical application for surface anesthesia. Generally speaking it is used just as cocaine is used for surface anesthesia, namely, in two to five percent solutions, and in one-half percent solutions for infiltration anesthesia. On the conjunctiva it has one objectionable side action; and that is the production of a hyperemia, though this effect is controlled readily by the addition of epinephrin to the butyn solutions. It has the advantage of not dilating the pupil nor drying the cornea, as does cocaine, and having no ischemic effect, it does not contract the tissues, as does cocaine, thus making it especially desirable in nose and throat work. As far as toxic effects are concerned, that question will have to be decided by accumulated experience in the use of the preparation, and up to the present time clinical trial seems to indicate that it is no more and perhaps less toxic than cocaine. Of decided value is the fact that butyn requires no narcotic blank and it is not thought that the drug is habit forming to the slightest extent.

With a growing tendency to do more and more surgery under local anesthesia, the value of procaine, apothesine and now butyn becomes of especial interest to all medical men, and we shall watch with interest the career of this new synthetic local anesthetic which bids fair to take a fixed place in our surgical work.

ANOTHER INFLUENZA EPIDEMIC

Several weeks ago reports were received showing that influenza was prevalent in many foreign countries and extending its sphere of action. Since then we have learned that the epidemic lasts from four to six weeks, that the type of the disease is much milder than in 1918, and broncho-pneumonia is the chief complication. A general spread of the infection is indicated from the fact that the disease has been following the main lines of travel and has finally developed in New York and is gradually spreading throughout the United States. It is now prevalent in several sections of Indiana, there having been reported a number of cases in Indianapolis and other cities. The character of the disease as it appears in this country is the same as that which has been prevalent in European countries, being mild in type, and broncho-pneumonia is the chief complication, but with a very noticeable lower percentage of deaths. There is, however, a tendency for the development of accessory sinus diseases and some neuroses which have a tendency to prolong the convalescence. Notwithstanding the fact that very much has been done in the way of experimenting as to the most efficient means of treatment, including extended trial with vaccines, but little has been accomplished in retarding the progress or limiting the ravages of the disease. Little or no protection against pneumonia has been afforded by the use of vaccines. Prevention seems to be of most importance. Attention to the recognized hygienic regulations is of more value than anything else. The reassuring feature of the present outbreak of the epidemic is that the disease is mild in character.

CAMOUFLAGED SALESMANSHIP

Have you ever heard stock salesmen say, "Our company has been passed by the State Securities Commission. Yes, sir, the State endorses this proposition and I guess if it is good enough to be endorsed by the State it is good enough for you!"? It is known that stock salesmen often have used as a talking point the fact that they are representing companies that have passed the Securities Commission to try to make their prospective buyers believe that the State endorses the stock they are selling.

Right here we want to impress this thought firmly in your mind—the State *does not* endorse any stock that is passed by the Securities Commission. In fact, it specifically says in the Blue Sky Law that one of the qualifications of advertising the fact that a stock is certificated is that there must also be a statement, printed in bold type, to the effect that "the Commissioner in no wise recommends such securities or other property".

So, when a salesman tries to impress you with the fact that his stock has been passed by the

Blue Sky Law, just remember this little part of the Blue Sky Law outlined in this story. It may save you money.

The Securities Commission examines properties for which stock is to be sold and makes certain restrictions as to how much stock shall be sold and on what basis. But it does not in any sense attempt to say that the proposition is a good one or a bad one.

The slogan, "Before You Invest—Investigate," still holds good. You are the one who is to decide how you are going to spend your money. Be wise and find out all about the proposition before you let somebody else use your earnings.

INCOME TAX RETURNS FOR 1921

The time is again at hand when physicians, along with all other individuals, must file their federal income tax returns for 1921. This report must be in the hands of the collector of internal revenue of your district before March 15, and must be accompanied by a remittance covering at least one-fourth of the tax for the year. Since last year several changes have been made in the law. The law at present requires that a return shall be made by the following individuals:

1. Every individual having a net income for the taxable year of \$1,000 or over, if single, or if married and not living with husband or wife.
2. Every individual having a net income for the taxable year of \$2,000 or over, if married and living with husband or wife; and,
3. Every individual having a gross income for the taxable year of \$5,000 or over, regardless of the amount of his net income.

The normal and surtax rates for the year 1921 under the new law are the same as for the year 1920. However, the specific exemptions have been increased, except in the case of a single person, who is entitled to an exemption of only \$1,000 as heretofore.

The head of a family, or a married person living with husband or wife, is allowed an exemption of \$2,500, unless the net income is in excess of \$5,000, in which case the allowable exemption is only \$2,000. The old law allowed a flat exemption of \$2,000 to the head of a family or a married person.

An exemption of \$400 is allowed for each dependent under 18 years of age, or who is incapable of self-support because mentally or physically defective, instead of \$200, as under the revenue act of 1918.

Practicing physicians are permitted to take into consideration the legitimate expense incident to their practice in addition to the exemptions for dependents and other general deductions. In view of the fact that some physicians failed to take advantage of some of these deductions last year, we are publishing detailed information herewith:

General Exemptions. If married, the physician may first record a deduction this year of \$2,500, if his income is \$5,000 or less, in place of \$2,000 last year from his gross income. If single, he may deduct \$1,000. For each child or dependent under the age of eighteen he is allowed a further deduction of \$400, instead of \$200, as last year.

Office Rentals. If the physician owns his own house and has his office in one room of that house, he may *not* claim a deduction for office rent. But if he pays rent to another person, for the use of the office space, he is permitted to deduct the amount expended for the rent of that office.

Automobile. Exemption may be claimed for the cost, repair and upkeep of automobile or other vehicle which is used exclusively in the conduct of a physician's business. The salary of the chauffeur, if most of his time is spent in driving to professional calls, may also be deducted. Amounts spent for the hire of taxicabs, and also street car fares, *on business calls*, may be taken off.

Assistants. Exemptions may be claimed for the salary of a nurse, laboratory assistant, stenographer, or clerical worker in the office, whose work is connected with the doctor's professional duties. Deduction also may be made for the salary of a maid or other person who spends her time in opening the door or answering the office telephone. Deductions may be made for that proportion of wages or salaries paid to employes in return for service directly in connection with practice or in connection with the care or treatment of patients.

Medicines, Instruments, Supplies. A doctor may take off an item for medicines used in the office in the treatment of patients. Bandaging, laboratory material, and all other supplies necessary to the running of a physician's office are permitted to be deducted.

On surgical instruments, he may charge off on an instrument with a fair average life of five years, one-fifth of its original cost each year.

General Office Expense. Telephone bills in their entirety may be deducted, because it is understood that the telephone in a doctor's office, even when that office is in his home, is almost entirely used for professional purposes.

Exemption is permitted for the correct proportion of expenditures made for light, heat and water. Depreciation of 10 percent of the original cost each year is allowed upon office furniture, it being considered that furniture should last about ten years.

Library. Most doctors have a medical library more or less extensive. In the courts it has been decided that after ten years a medical book is out of date and therefore worthless. For this reason the doctor is allowed a depreciation item of ten percent each year on his medical library.

Taxes, Licenses. Any taxes which a doctor may be required to pay upon materials which are required for his work may be deducted, and all licenses which he is by the nature of his business required to take out may be taken off of his gross income reported. This includes his license to prescribe alcohol, narcotic license, automobile tax, local occupational taxes and so forth.

Professional Dues. Also, a doctor may deduct dues paid to professional associations to which, in the interest of his business, he belongs, and exemption is also allowed for subscriptions to all medical newspapers and journals.

When to Deduct Unpaid Debts. If his books are kept according to the "Cash Receipts and Disbursements" system, he may not charge off any unpaid debts, because as explained in the tax manual, "if his books are kept according to this system, he is only reporting as gross income those accounts which have proved to be good, and therefore bad accounts cannot be deducted because they have already been excluded."

If the books be kept on an "Accrual" basis (that is, on the basis of expenses actually incurred and payable even though not yet paid, or income earned although not yet collected), it is permitted that the doctor may charge on his income tax blanks all debts which are definitely ascertained to be worthless during the year past.

In the same way, the doctor is permitted to claim deductions, for all other expenses within the scope of his profession, and the amount of his tax is determined on the net income which remains after all of these items have been deducted.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

THE JOURNAL office is in need of the January 15, 1921, issue of the *Journal of the A. M. A.* (Volume 76, No. 3) to complete the files for binding, and the A. M. A. office is unable to furnish same. Accordingly, if any reader has

this copy which he does not care to retain for his own files, THE JOURNAL will appreciate the courtesy in sending it in to this office for the files here.

EVERY county medical society in the United States has received some resolutions calling for reforms in the A. M. A. and indicating that reforms can be accomplished only by change of leadership. Perhaps those who for many years have dictated the policies of the A. M. A. may see the "handwriting on the wall" and change their tactics, but we haven't much faith in reformation.

WE published in the January number of *The Journal* the obituary of Dr. Greenly V. Woollen, of Indianapolis, who died December 10. Dr. G. W. H. Kemper, for many years historian of the Indiana State Medical Association, calls our attention to an erroneous statement in the obituary which credits Dr. Woollen with being one of the founders of the Indiana State Medical Association. Inasmuch as this Association was founded in 1849, and Dr. Woollen was born in 1840, it is very evident that he had nothing to do with the founding of the Association, even though he was actively interested in it during some of the earlier years of its existence.

INDUSTRIAL Insurance Companies usually want a doctor to dress a wound for a dollar and then spend the rest of the month making out reports for them. They then kick on the bills, and they make it a rule to kick, no matter what the charges may be. The worst of the situation is that when some doctor has a controversy with an insurance company concerning a perfectly modest bill, a number of his confreres will come forward with the statement that the bill is excessive, notwithstanding the fact that, under similar circumstances, they themselves would try to collect satisfactory fees. Such is the cooperation and loyalty of certain men in the profession.

INDIANAPOLIS now boasts of some chiropractic colleges and, while Fort Wayne with its numerous chiropractic schools may have set the pace, it remains to be seen if the capital city does not eventually take the lead because of the fact that it is the capital of the state, centrally located, and, with its large population, offers a fertile field for the acquisition of students. It is possible that the State Board of Medical Registration and Examination may not relish the sight of chiropractic colleges right in the shadow of the capitol building, but there is no use in worrying about a little thing like that. We have been unable to enforce our medical practice acts, so why look with disfavor upon chiropractors or any other medical law breakers?

OUR editorial note in the January number concerning discrimination in the awarding of hotel reservations for the annual session of the A. M. A. has brought down upon our heads the wrath of the lordly secretary of the A. M. A. who seemingly disputes the right of anyone to question his acts. The subject under discussion is not settled by specious and misleading explanations nor by questioning the veracity of anyone who calls attention to the matter. Facts are stubborn things which are hard to down. To use an old saying, "It is a long lane that has no turn," and as we are accumulating some rather interesting information, we shall have something to say upon the subject later.

THE chiropractors are getting more nervy every day. In Ohio the "State Chiropractic Institute", located in Columbus, has been sending out to various physicians of Ohio invitations to take a "two weeks' course of instructions, *for physicians exclusively*, in the technic of chiropractic adjustments". The amusing feature of the announcement contains the information that this is a new field of scientific research for the medical profession. Evidently this is a new species of advertisement and it will redound to the profit of the chiropractors through the mistaken notion on the part of the public that chiropractic adjustments have a scientific basis and that the regular medical profession, in its long and honorable career, has been unable to discover the value of a method of treatment which has been nurtured in ignorance and quackery.

THAT there is profit in a well managed company furnishing medico-legal defense in malpractice suits is attested by the fact that the Medical Protective Company of Fort Wayne now has over one million dollars in assets. An enormous business has been built up by this company which makes a specialty of the medical defense business. In justice to the company it may be said that it never has defaulted to the slightest extent on a single contract ever issued, and all of the officers and directors of the company have established reputations for integrity. It is unfortunate that occasionally a suit for malpractice is brought against a physician, usually without justifiable cause, but it is fortunate that protection may be secured through insurance that guarantees appropriate attention to the interests of the physician who has been sued.

In asking for increased patronage of the advertising section of the Journal of the Michigan State Medical Society, the editor calls attention

to the fact that the expense of publication has increased over four hundred per cent. during the past five years, with little chance of any marked decrease in the cost for some time to come. The necessity for increased incomes in order to maintain or improve the present standard of medical periodicals is the excuse for asking the readers of state journals to increase advertising income by patronizing the advertisers whenever consistent to do so, and thus making the advertisers feel that they are receiving adequate returns for the money expended. What is true concerning the publication of the Michigan State Journal is true of the publication of every other state journal, but the difficulties may be met by the co-operation of everyone interested in the success of the state medical journals.

THE doctors who make up the rank and file of the medical profession should bear in mind one fact, and that is that not one of the various schemes to socialize medicine has developed in the minds of lay individuals. They are proposed and supported by erstwhile leaders in the medical profession. The public is not demanding any such schemes as "pay clinics" as inaugurated by Cornell University, or "community clinics" advocated by Hugh Cabot of the University of Michigan, or the fifty-seven varieties of free clinics for the well-to-do proposed by public health officers. The people in the United States, even the poorest, receive better medical and surgical attention than is given the people of any other country in the world. It is time to analyze the motives of the leaders in our profession when they propose radical innovations in the way of care for suffering humanity. Usually there will be found a "nigger in the wood pile" in the form of a desire for personal preference or profit. However, "the worm is beginning to turn," and henceforth the uplifters in our profession will have to watch their steps!

IT is unfortunate that the wording of an editorial note in the January number of *The Journal* gives occasion for doubt as to the character of the services being rendered by the chairman of the hotel committee for the St. Louis session of the A. M. A.

As a matter of fact the intention was to call attention to the large number of reservations made by the Secretary at the leading hotel where the annual session of the A. M. A. is held, with early subsequent announcement by the hotel that all available accommodations had been reserved, and that if one played in luck perhaps good reservations would be secured through the chairman of the hotel committee.

While the wording in the editorial note could be interpreted as a reflection upon the chairman of the hotel committee, yet no unfavorable meaning in that direction was intended. Sufficient evidence is at hand to indicate that there has been considerable jugglery in the assignment of hotel reservations for the annual sessions of the A. M. A. and it was with the idea of calling attention to an abuse of position or privilege, or both, that brought forth the editorial note to which attention is called, and which may have led to a misinterpretation of the meaning concerning the fairness of the chairman of the hotel committee for the St. Louis session who, so far as we know, is not engaged in the practice of which complaint is made.

QUITE a large number of county medical societies in Indiana have passed the resolutions sent out by a medical advisory committee of which Dr. McMechan, of Ohio, is secretary. Among the evils aimed at by the resolutions are:

- (1) Foundation control of "full time" medical education.
- (2) Lay board domination and the "closed shop" hospital.
- (3) Socialized state medicine, subsidized community health centers and hospitals under political or university control.
- (4) Legislative dictation of therapy and fees.
- (5) Demoralization of medical standards by the expansion of cults.
- (6) Exploitation of the specialties by lay technicians.

The resolutions call upon delegates to the A. M. A. to vote for a change of policy and leadership in the A. M. A. There are good reasons for the adoption of the resolutions, and there is every reason why the House of Delegates of the A. M. A. should carry out, in the main, the suggestions offered.

THE members of the Hendricks County (Indiana) Medical Society are opposed to treating people who patronize pseudo-medical cults and who are in the habit of calling regular physicians as a last resort or for the purpose of signing the death certificate. At the meeting, January 27, 1922, the Society passed the following resolutions:

"Whereas, certain pseudo-medical cults, including Christian Science practitioners, chiropractors, etc., are showing great activity with their propaganda, and

"Whereas, some people employ these pseudo-healers to treat dangerous diseases and continue treatment with said pseudo-healers until the disease becomes incurable or until the patient is almost dead and then a regular physician is called to take charge of the case in order that he may sign a death certificate; therefore, be it

"Resolved, That the members of the Hendricks County Medical Society refuse to attend patients who have treated with the pseudo-healers until in a hopeless condition or until nearly dead; and that members refuse to sign death certificates under such conditions; and be it further

"Resolved, That members refuse to treat patients who are at the same time taking treatment from the pseudo-healers."

INDIANA doctors may be interested in knowing that there is an organized ring conducting fake soliciting schemes, and that this ring owns a clearing house of information to aid in the collection of money. The ring maintains a list of possible prospects which is furnished to the individual members of the ring, together with such information concerning the nature of the prospect as seems necessary in order to effect a collection with him. Very naturally an attempt is made to make it appear that the object for which funds are solicited is a most deserving one and should be supported by business and professional men. The ring is able to furnish a subscription list containing signatures of heads of large business houses, manufacturers, and professional men, showing that these firms and individuals already have contributed, and the amount contributed. These lists usually are subscription lists of some scheme recently promoted, and from which all trace of the old plea has been removed. The ring is constantly exchanging ideas and suggestions, not only of lucrative districts but upon good schemes. Better Business Bureaus all over the country are warning merchants, professional men, and others against these fake soliciting schemes, and it is suggested to all those who are tempted to contribute to any cause, or to aid in any promotion scheme, that full information be obtained from the nearest Better Business Bureau before parting with any money, and in this way perhaps avoid being duped and defrauded by some smooth solicitor.

ACCORDING to the February number of the *Journal of the Michigan State Medical Society* the representatives of the Medical Department of the University of Michigan met with the

Council of the Michigan State Medical Society in Detroit early in January and discussed very freely the future activities and policy of the University as it pertains to medical issues and especially the new form of danger that threatens us—socialized medicine. From all we can learn there seems to be a desire to get together on a constructive policy, and the University authorities volunteered the information that they desired the good will and co-operation of the profession of Michigan. It was claimed by those in attendance at the conference that the University was not in favor of so-called State Medicine, and yet no explanation was made concerning the various moves on the part of the University, including the proposal to establish community clinics by the University, which certainly have a tendency to establish medical practice under state control, the one thing to which we are objecting strenuously. Furthermore, the report of the conference does not show that there was any explanation made concerning the reasons for building and equipping hospital facilities at Ann Arbor far beyond the purely teaching needs of the institution. If we are to have community clinics let us confine those clinics to the deserving poor, and let the compensation for the services be in keeping with the ability of the patients to pay, but above everything else we should have those clinics divorced from any kind of federal, state or municipal control with all of the evils attending such bureaucratic management.

If we can judge by the discussion of the subject in medical societies and medical press it is very evident that the rank and file of the medical profession is awakening to the dangers that threaten the adoption of certain forms of socialized medicine as advocated by would-be reformers and philanthropists. It will be a sorry day for the people as well as the individual members of the medical profession when the practice of medicine is under the control of the State. The results of such a pernicious system are seen in some of the foreign countries where the majority of the people are given inefficient and indifferent care and the individual members of the medical profession are reduced to a position that is economically worse than that of the most ordinary craftsman. This idea of building county or state hospitals in every populous community and opening them to the public free of charge to any and all who may come, or the establishment of community clinics by our state universities or public health boards with the idea of furnishing gratuitous medical and surgical services to the people, sounds rather innocent when presented by some of the uplifters but it is a dangerous proposition. As a matter of fact the people are not

suffering for want of skilled attention if they desire to have it, and all of these efforts to improve conditions are sponsored for the most part by members of our profession who are either misguided or have personal ends to gain. It is quite possible that there is a need for more and better medical and surgical attention for the masses, but why discuss plans which in the end will prove detrimental to the medical profession as well as the public? Why not systematize our efforts to give more and better service to the people by greater co-operation among medical men in the various communities.

OUR readers may remember that Cornell University announced a few months ago that it would open a pay clinic. Very naturally, this scheme opened competition with the medical profession. It was bound to result in opposition of the medical profession eventually. Now the Bronx County Medical Society, of New York, at a meeting held on November 16, 1921, unanimously adopted the following resolutions and recommendations:

"RESOLVED: That we protest against the abolition of the Poor Clinic by Cornell University and against the entrance of the University into commercial medicine for a profit.

"That the establishment of Pay Clinics by a University is inimical to the best interests of the public at large and of the medical profession in particular because such Clinics are in direct competition with the physicians who practice in the immediate and remote vicinity.

"That the offer of cooperation by the University with the general practitioner is a blind to beguile the latter to refer cases to them.

"That we condemn the conduct of the physicians who permitted their names and their positions to be used for such crass newspaper publicity as the advance announcements contained.

"That such advertisement is distinctly adverse to the best actions of Medical Men and to the Code of Ethics as established by the American Medical Association.

"That we recognize that these very men will not and cannot offer their services to the patient but will merely act in an advisory capacity far from the clinic rooms.

"That for all the above reasons we recommend that the respective County Societies to which these men belong and under whose jurisdiction Cornell University Medical School exists shall take proper and fitting action to reprimand these men and the University, and furthermore, shall recommend to its members that they not accept positions in a Dispensary that works to the economic detriment of their brethren."

IN evidence of the inconsistency of the average insurance company, we desire to call attention to some interesting correspondence that one of our councillors has engaged in, in an effort to establish the fact that a physician should receive compensation for services rendered an insurance company. In brief the facts are as follows: The insurance company wrote the doctor concerning one of his patients who had applied for insurance as follows: "Before issuing him further insurance we would like to know your opinion of the applicant's health condition, what possible effects you think his injury would have on any future illness, what resistance would he have, and what his health condition is at the present time." To this letter the doctor replied that he charged five dollars for such an opinion and that he would send it upon receipt of check covering the charges. The insurance company came back with the explanation that the answers desired were to secure further information concerning the applicant's physical condition so that proper decision could be made whether the risk was acceptable or not. As indicating how gullible medical men are the company said: "This is the first occasion in doing a nation-wide business that we have received a letter from a physician withholding the information desired until receiving a fee." A very appropriate answer came from the doctor and was as follows:

"I presume that you are in business to earn dividends upon your stock, and when you insure a member you charge him such rate of premium as the experience of your company and others has shown to be adequate to pay his average rate of loss and earn you something for your trouble. That is right and fair.

"I am practicing medicine to maintain myself and family and to accumulate some reserve against old age and disability. I have a fairly accurate knowledge of what it costs me to serve each patient who comes to my office and whom I may visit, and I know what charge is reasonable for the services rendered, and which I must make if I am to maintain myself. In practicing my profession I am selling my services and my knowledge of the human body and the cure of its ailments, and unless I receive money for this service I cannot support myself and my family, pay rents, office girl, drugs, telephone, new equipment, upkeep, etc.

"You write me as follows: 'We would like to know your opinion of the applicant's health condition, what possible effect you think his injury would have on any future illness, what resistance would he have, and what his health condition is at the present time.'

"You are asking me to render you an expert opinion of this applicant's health for the purpose of protecting you in your business, and this opinion you should be willing to pay for and you certainly will pay for it if you or any other insurance company obtain such a statement from me. The fee of five dollars asked of you is certainly a very small one for such a service. The fact that you have found the medical men as a class such easy marks that you can 'work' them and secure their services for nothing to protect you and your business is one of the outstanding facts that go to show the present spineless condition of the majority of my profession. I am pleased to know that I am a forerunner in this matter, and I feel sure that you will find more and more like me as time goes on.

"The applicant about whom you desire an opinion has received value in full for such fees as he has paid for any services I have rendered him, but if the answering of this inquiry were to protect him there might be some reason for me to grant him such courtesy; but I owe you nothing, and I am under no obligation to render you such gratuitous services to protect your company against loss."

To this letter the insurance company replied by "passing the buck" and placing the responsibility upon the applicant in furnishing information concerning physical condition. The company also has the nerve to say that all information concerning the physical condition of the applicant is of value to the applicant only, and that, accordingly, no provision is made for the payment of a medical examination or a medical opinion by the company. The average doctor "falls" for that kind of an argument, even though he knows that it is false. In reality the expert opinion concerning an insurance risk is of economic value to the company inasmuch as it undoubtedly is a means of saving the company from loss. It is a service that has a definite value on a basis of dollars and cents. The insurance company should pay for that service, and the only reason that it doesn't is because of the spineless attitude of the average medical man.

DEATHS

JOHN T. NEWTON, M.D., died at his home in St. Bernice, January 15, at the age of 73 years. Dr. Newton graduated from the Rush Medical College of Chicago in 1879.

EDWIN B. BRIGHAM, M.D., of Indianapolis, died at his home January 18 at the age of sixty-five years. Dr. Brigham was a graduate of the Indianapolis Physio-Medical College.

CYRUS L. WILSON, M.D., died January 18 at his home in Ewing, at the age of 68 years. Dr. Wilson graduated from the Medical Department of the University of Louisville in 1881.

CHARLES L. BOYD, M.D., of Paoli, died January 25 from the effects of paralysis, at the age of 68 years. Dr. Boyd graduated from the Medical College of Indiana, at Indianapolis, in 1881.

FREDERICK L. BUNCH, M.D., died January 10 at his home in Muncie, as a result of an illness caused by injuries received during the war. Dr. Bunch was 36 years of age and graduated from the Bennett Medical College in Chicago in 1907.

J. H. WARREN MEYER, M.D., died at Denver, Colorado, as the result of pneumonia, December 17, 1921, at the age of 38 years. Dr. Meyer was a lieutenant in the United States Navy, Recruiting Forces. He graduated from the Rush Medical College of Chicago in 1907.

SAMUEL C. LORING, M.D., died at his home in Plymouth, January 2, at the age of 62 years. Dr. Loring graduated from the Rush Medical College in Chicago in 1886 and was a member of the Marshall County Medical Society, the Indiana State Medical Association, the American Medical Association and the American College of Surgeons.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

DR. A. E. RHYAN has been made county health officer of Parke County.

DR. CROUCH, of Fillmore, has been made county physician for Putnam County.

THE annual conference of health officers was held in Indianapolis, February 13 to 18.

VITAL statistics for 1921 show 67,850 births and 35,134 deaths in the State of Indiana.

THE Lawrence County Medical Society held its regular meeting January 4, 1922, at Bedford.

DR. HERMANN M. BIGGS has been re-elected president of the American Social Hygiene Association.

DR. E. M. CONRAD has been made health officer of Anderson, Indiana, to succeed Dr. J. A. Long.

THE office of Dr. E. H. Clouser at Muncie was entered Christmas night and a quantity of drugs stolen.

THE Public Health Nursing Association held a meeting in Indianapolis, January 12. Officers were elected.

FORTY-FIVE acres have been added to the ground area of the Sunnyside Sanitorium of Indianapolis.

DR. W. G. WEGNER, of South Bend, has opened new offices in the Farmers Trust Building of that city.

DR. S. G. WHITE, of Warsaw, was injured in an automobile accident, January 10. The injuries were not serious.

DR. and MRS. A. L. WILSON, of Indianapolis, were injured in an automobile accident January 3. Neither was seriously injured.

DRS. FITZPATRICK, COTTON and HOPPENRATII, of Elwood, have been made the new members of the city health board of that city.

THE Randolph County Medical Society held its regular meeting January 9. Dr. Hunt presented a paper on disease of the kidneys.

DR. JOHN A. PFAFF, of Indianapolis, has removed his office from the Bankers Trust Building to Suite 902-3 National City Bank Building.

THE office of Dr. B. F. Dudding, of Hope, Indiana, was broken into and robbed, December 30, of a large amount of opium and morphine.

THE Lake County Medical Society held a meeting January 12 at Gary. Papers were presented by Drs. Ira Miltimore and H. C. Parker.

DR. C. D. LANE, of Ligonier, is remodeling his office. The new office will include an operating room, x-ray room and two detention rooms.

DR. C. F. HOPE has moved from Coatsville to Shoals, Indiana, where he will practice medicine in the office formerly occupied by Dr. H. W. Shirley.

DR. HARRY L. FOREMAN, of Indianapolis, has announced his removal to new offices at 3005 North Illinois Street for the practice of general medicine and obstetrics.

THE Elkhart County Medical Society held a meeting at Goshen, January 5. A paper was presented by Dr. Albert J. Ochsner, of Chicago, on "Osteomyelitis".

THE Muncie Academy of Medicine held a meeting January 20 at the Hotel Roberts. A paper on "Epidemic Jaundice" was presented by Dr. S. C. Waters.

ACCORDING to an announcement made by the Children's Bureau, twenty-two states have accepted the provisions of the Sheppard-Towner Infant and Maternity Law.

THE Wabash County Medical Society held its regular monthly meeting at Wabash, January 20. Papers were presented by Drs. Fred Whistler and L. O. Sholty.

A HOME for nurses in the employ of the Schneck Memorial Hospital at Seymour, Indiana, has been presented by Mrs. Louise Schneck as a memorial to her husband.

THE Putnam County Medical Society held a meeting January 5 and the following officers were elected: Dr. R. H. Richards, president; Dr. C. C. Tucker, secretary-treasurer.

A NEW government hospital will be formally opened at Dawson Springs, Ky., February 22, according to an announcement made by Assistant Secretary of the Treasury Clifford.

THE Physicians' Club met at the St. Joseph's Hospital, Mishawaka, January 18. Dr. A. C. Yoder, of Goshen, presented a paper on "The Present Status of Chronic Gastritis".

DRS. E. E. HODGIN, W. H. FOREMAN, GOETHE LINK and ARTHUR E. GUEDEL have been made members of the new board of health of Indianapolis, recently appointed by Mayor Shank.

DR. D. F. CAMERON has been appointed assistant physician and surgeon for the Pennsylvania Railroad and has established offices in the Medical Arts Building in Fort Wayne.

THE Wells County Medical Society held its first meeting of the year at Bluffton, January 17. Dr. D. D. Jones, of Berne, presented a paper on "The Sympathetic Nervous System".

THE Delaware-Blackford Academy of Medicine held its first meeting of the year at Muncie, January 6. Dr. Robert Prebel addressed the meeting, his subject being "The Logic of Medicine."

THE *Red Cross Courier* will be a new weekly periodical published by the American Red Cross Society which will take the place of all bulletins now published at National and division headquarters.

THE Johnson County Medical Society has elected the following officers for 1922: Dr. J. A. Craig, president; Dr. Luke P. V. Williams, vice-president; Dr. A. T. Records, secretary-treasurer.

PLANS are being made for the erection of a million dollar office building for physicians in Indianapolis. The plans include a small hospital and operating room. The building is to be fifteen stories.

DRS. EDWARD KRUSE and LYMAN RAWLES, of Fort Wayne, have been appointed examining physicians for crippled children seeking treatment at the Shrine hospital now under construction at St. Louis.

PLANS were made for the opening of an office for the county health doctor and nurses, and the formulation of county health plans for this year were discussed for Marion County at a conference held January 5, 1922.

DR. JOSEPH MACDONALD, JR., editor and publisher of the *American Journal of Surgery* and co-publisher of *Medical Pickwick*, died suddenly in his office on January 7 of cerebral hemorrhage at the age of 51 years.

THE monthly meeting of the Clark County Medical Society was held January 3, 1922, and the following officers were elected: Dr. T. J. Marshall, president; Dr. A. H. Mead, vice-president; Dr. Giles E. Mowrer, secretary.

PLANS have been made for the establishment of a hospital for incurable patients who are now in the City Hospital at Indianapolis. More room is needed in the City Hospital for patients who can be restored to normal health.

THE Sullivan County Medical Society held a meeting January 20, 1922, and the following officers were elected: Dr. Paul Higbee, president; Dr. J. R. Crowder, vice-president; Dr. J. S. Brown, secretary-treasurer.

THE Treasury Department has approved the plans for the remodeling of the Bronx Hospital for the treatment of ex-service men. The hospital is to be ready for occupancy by March 15, and will be for the treatment of general cases.

AMERICAN Legion posts of Minnesota will erect a two hundred thousand dollar hospital where Drs. William and Charles Mayo will treat former soldiers of the world war. Patients will be charged according to their ability to pay.

DR. HOWARD B. CROSS, of the Rockefeller Institute of Medical Research, who went to Vera Cruz, Mexico, to study yellow fever, contracted the disease while inspecting sanitary conditions at Tuxtepec, and died at Vera Cruz, December 27.

DR. G. H. ESPINLAUB, of Indianapolis, and a nurse, Miss Villa Corzine, were injured in an automobile accident, January 13, when the ambulance in which they were making an emergency call was struck by a cattle truck. Neither was seriously injured.

THE Boone County Medical Society held its annual meeting Tuesday, January 3, at Lebanon and the following officers were elected: Dr. J. H. Black, president; Dr. John D. Coons, vice-president; Dr. E. H. Hare, secretary-treasurer; Dr. P. B. Little, delegate.

DURING January the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: The Abbott Laboratories, Butyn. G. W. Carnrick Co., Solution Post-Pituitary. Parke, Davis & Co., Pituitrin "O".

THE LaPorte County Medical Society held a meeting January 13, 1922, at Michigan City. A paper was presented by Dr. H. H. Martin on "Review of Gall Bladder and Gall Duct Therapy." The paper was discussed by Drs. E. G. Blinks, N. E. Funk, and J. V. Kerrigan.

DR. B. G. DUPRE has resigned his position of surgical assistant to Dr. H. A. Duemling of the Lutheran Hospital, Fort Wayne, to become surgical man at the Hope-Methodist Hospital of that city. Dr. H. L. Norris will fill the vacancy made by the resignation of Dr. Dupre.

AT a recent meeting of the Board of Regents of the University of Michigan it was voted to merge the homeopathic medical school with the medical school of the University. Last year there were but seven graduates from the homeopathic school and the cost of maintenance was more than \$47,000.

WILLIAM C. VANARSDEL, 72 years old, died at his home in Indianapolis, January 8. Mr. VanArsdel was president of the board of trustees of the Methodist Hospital in Indianapolis until prevented from active participation in its affairs when he was made president emeritus of that institution for life.

DIVISIONS of child and infant hygiene and nursing of the State Board of Health were merged into one division at a meeting held in Indianapolis, January 11. The divisions were combined in order to meet the requirements of a Federal law so that an appropriation of \$10,000 for the health work may be obtained.

THE Bartholomew County Medical Society held its annual meeting January 10 at Columbus where the following officers were elected: Dr. F. D. Norton, president; Dr. C. M. Jackson, vice-president; Dr. Lyman Overshiner, secretary-treasurer; Dr. George T. MacCoy, delegate, and Dr. O. A. Delong, alternate.

AT a meeting of the state board of medical registration and examination held at Indianapolis, January 12, the following officers were elected: Dr. W. A. Spurgeon, Muncie, president; Dr. E. M. Shanklin, Hammond, vice-president; Dr. W. T. Gott, Crawfordsville, secretary; Dr. Paul Tindall, Shelbyville, treasurer.

AT the Indianapolis session of the Indiana Academy of Ophthalmology and Otolaryngology, January 20, the following officers were elected: Dr. D. O. Kearby, president; Dr. H. C. Knapp, first vice-president; Dr. J. W. Carmack, second vice-president; Dr. B. W. Egan and Dr. M. Ravdin, counselors.

FULTON, Delaware and Gibson counties have accepted the proposal of the international health board of the Rockefeller Foundation to provide a public health officer with specialized training for full time service in the county. It is desired to show the superiority of a full-time, specially trained man over the present system in use in this state.

AT a meeting of the Public Health Nursing Association held in Indianapolis, January 12, a resolution was made and passed to set aside \$1,200.00 as a foundation fund to be used for carrying on the association work. It is to be known as the Addie Hunt Bryce fund, Mrs. Bryce having been one of the founders of the association.

DRS. GEORGE E. DE SCHWEINITZ, CHARLES W. RICHARDSON, and FRED B. LUND have been appointed as a committee on the Gorgas Memorial. This appointment was made to comply with a request from the Gorgas Memorial Institute of Tropical and Preventive Medicine of Panama for the cooperation of the American Medical Association.

AN independent appropriation bill presented to the lower house of Congress includes administrative expenses of the U. S. Veterans' Bureau. The measure carries \$64,658,680 for medical and hospital service. This is an increase of \$6,658,680 over the current fiscal year and is in accordance with the recommendation of the budget bureau.

DR. WALTER P. BOWERS has resigned as secretary of the Massachusetts Board of Registration in Medicine which position he has held since 1913, to assume the editorship of the *Boston Medical and Surgical Journal*. This Journal recently has been taken over by the Massachusetts Medical Society and under Dr. Bowers' editorship is undergoing a number of improvements.

COMPETITION is now open to non-members of the American Laryngological Association for the de Roaldes Prize. The prize is a gold medal valued at one hundred fifty dollars and will be presented for the best original thesis on a subject pertaining to laryngology or rhinology. Theses must be in the hands of the chairman of the prize committee, Dr. D. Bryson Delavan, 40 East Forty-first Street before the first of April.

A BILL for the reorganization of the United States Public Health Service has been introduced in the Congress. This bill provides that officers of the reserve corps of the Public Health Service, not to exceed 550, may be transferred to and commissioned in the regular corps of the service. The office of Surgeon General shall

be filled by appointment by the President for a term of four years. It also provides that there shall be a corps of nurses, dietitians, and reconstruction aides in the United States Public Health Service.

ACCORDING to an announcement, \$1,320,000 has been appropriated for the erection of a new medical building at Yale University to be known as the Sterling Hall of Medicine. The building will contain a medical library of approximately twelve thousand volumes, an amphitheater with seating capacity of two hundred fifty, administrative offices of the dean and registrar, faculty room, students' common room, and single rooms for unmarried instructors in the preclinical subjects. A wing will provide laboratories on the first and second floors.

THE Adjutant-General has submitted a proposed legislation to Congress which establishes a definite law covering promotions in the Medical Corps of the Army. This legislation provides that an officer in the Medical Corps shall be promoted to the grade of captain after three years' service, to that of major after twelve years' service, to lieutenant-colonel after twenty years' service, and to the grade of colonel after twenty-six years' service. The purpose in this legislation is to increase the efficiency of the medical department of the Army.

ROBERT BURDINE, leper, who was discovered in Indianapolis, with anesthetic leprosy about two years ago, was placed under quarantine by the State Board of Health and treated with ethyl ester of Chaulmoogra oil. The Board has now pronounced him cured and discharged the quarantine. The most careful search does not find in the nose or elsewhere the lepra bacillus which at the beginning of the treatment was easily discovered, every slide showing the organism. The State Board of Health is compelled to assume that this leper is cured because there is no evidence that he has the disease and the law therefore cannot hold him.

THE United States Civil Service Commission announces that there is urgent need for reconstruction assistants and aides in physiotherapy and occupational therapy, trained nurses and physicians, to serve in hospitals and other establishments of the United States Public Health Service. Applications for these positions will be received by the Commission until further notice. Applicants will be rated upon their education, training, experience, and physical ability. Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or from the Secretary of the Local Board of Civil Service Examiners at the postoffice or customs house in any city.

THE U. S. Public Health Service announces a Venereal Disease Institute to be held under the direction of the Illinois State Department of Public Health at the Congress Hotel in Chicago, March 13-18, inclusive. Courses in syphilis, gonorrhea, the problem of prostitution and delinquency, clinics and their management, clinic social work and methods of health education will be given. Special features will include daily noon-day luncheons and evening clinics.

An invitation is extended to all physicians and especially those who are particularly interested in venereal diseases. Those who plan to attend are urged to register at once. Registration cards and programs may be obtained upon request from Dr. I. D. Rawlings, Director of Public Health, Springfield, Illinois.

A COURSE on Current Problems of Biochemistry and Experimental Medicine is offered by the Indiana University School of Medicine, the first lecture being delivered Wednesday, February 15, 1922, at 8:00 P. M. The course is conducted by Professor B. B. Turner and consists of eight lectures to be given on alternate Wednesday evenings at the Indiana University School of Medicine, Indianapolis. The second lecture will be given Wednesday, March 1, at 8:00 P. M.

The subjects discussed will include nutrition, intermediate metabolism of food substances, vitamines, basal metabolism, endocrine glands, kidney function and nephritis, acidosis, relation of chemical constitution to physiological action. The fee for the course will be \$5.00.

For further particulars address Registrar, Indiana University School of Medicine, Indianapolis, Indiana.

One of the most important developments in the medical history of the past five years has been the work of the Council on Pharmacy and Chemistry, of the American Medical Association. Their examination and analysis of newer remedies has done much to advance the standard of manufacturing pharmacy; it is safeguarding the doctor against inferior products, and indicating those for which misleading claims are made.

The cooperation of the doctor in using and prescribing Council-Passed products is making this work more effective each year. The cooperation of the manufacturers is, also, an encouraging recognition of the value of this service. A partial list of the Council-Passed Remedies, manufactured by The Abbott Laboratories, Chicago, appears in this issue. These are obtainable on prescription at the leading pharmacies, or may be obtained direct, as desired.

SOCIETY PROCEEDINGS

COUNCILORS' MEMBERSHIP CONTEST		Number of Counties	1921 Membership	1922 Membership to Date	Percentage
District	Councilor				
First	Dr. Willis	7	176	136	.77
Second	Dr. Schmadel	7	149	108	.72
Third	Dr. Leach	9	130	88	.67
Fourth	Dr. Osterman	10	138	127	.92
Fifth	Dr. Weinstein	5	158	118	.78
Sixth	Dr. Spilman	8	150	111	.74
Seventh	Dr. Earp	4	425	308	.73
Eighth	Dr. Conrad	5	172	68	.39
Ninth	Dr. Moffitt	10	253	210	.83
Tenth	Dr. Shanklin	5	151	97	.64
Eleventh	Dr. Black	6	191	170	.89
Twelfth	Dr. Morgan	8	241	194	.80
Thirteenth	Dr. Berteling	8	274	241	.88
		92	2608	1976	

THE COUNCIL

The regular mid-winter meeting of the Council of the Indiana State Medical Association was held in the Assembly Room at the Board of Trade Building, Indianapolis, Tuesday, January 10, 1922.

At 12:30 p. m. the Councilors were guests of President Davidson at luncheon after which the meeting convened with the following present: Drs. W. R. Davidson, E. M. Shanklin, E. M. Conrad, Joseph Schmadel, C. S. Black, J. H. Weinstein, E. E. Morgan, F. J. Spilman, Walter Leach, S. E. Earp, A. G. Osterman, W. R. Moffitt, and C. N. Combs.

The Chairman, Dr. Shanklin, presided. The minutes of the previous meeting were read and approved.

Dr. E. M. Shanklin was re-elected as Chairman of the Council for the year 1922.

Dr. A. E. Bulson, Jr., Editor of THE JOURNAL, was absent and no report was made.

The Councilors made their respective district reports. The Fourth District has had the best year of its existence. The Eleventh District at its district meeting voted to ask the Council to recommend changing Howard County from the Ninth to the Eleventh District.

Dr. Black moved that the Council endorse the transfer of Howard County from the Ninth to the Eleventh District, and refer the proposal to the House of Delegates for final action.

Seconded by Dr. Moffitt.

Motion carried.

The Twelfth District Councilor has been furnishing programs for the weaker county societies, and finds that this plan is of great assistance to them. He recommends it to other district councilors.

The Council went into executive session and considered the case of Dr. J. Sater Nixon, Kokomo, versus the Howard County Medical Society. The Council unanimously voted to sustain the action of the Howard County Medical Society in expelling Dr. Nixon.

Adjourned.

CHARLES N. COMBS, Secretary.

SECRETARY'S REPORT

To THE COUNCIL:

One year ago I ventured the prediction that we would be able to increase our membership in 1921, and it is now very gratifying to be able to report that such is the case.

Membership Jan. 1, 1921..... 2513

Died 28

Left State, retired, etc. 31

Delinquent 114 173

..... 2340

New members..... 268

Membership Jan. 1, 1922..... 2608

In the past years, I have endeavored to stimulate rivalry between the county secretaries for the purpose of increasing the membership. This year I am taking the territory of the different councilors, and will publish the 1921 membership from each councilor district. Each month in THE JOURNAL, there will be published the 1922 membership to date for each of these districts with a percentage column for the purpose of comparison. Each councilor will be expected to be responsible for the membership of every eligible physician in his territory, and should have at the end of the year not less than a 100% enrollment.

Respectfully submitted,
CHARLES N. COMBS, Secretary.

TREASURER'S REPORT FOR THE YEAR 1921

GENERAL FUND

Balance on hand January 1, 1921.....	\$ 7,028.40
Membership dues at \$4.00 per member (2608 members).....	10,428.00
(One member in service and dues remitted) Indianapolis Exhibitors.....	559.99

Total \$18,016.39

DISBURSEMENTS

Journal Subscriptions, \$2.00 per member.....	\$ 5,216.00
Secretary-Treasurer, stenographer	858.00
" " honorarium	500.00
" " postage and supplies.....	111.72
Legislative Committee.....	948.89
Other Committees.....	28.00
Councilors	72.11
Printing	311.00
Storage	66.00
Indianapolis Session.....	887.81
Rental	\$308.96
Stenographic Report.....	362.10
Programs	67.50
Registration Clerks.....	20.00
Badges	39.75
Stereopticon	10.00
Guest	79.50

Total Disbursements..... \$ 8,999.53

Balance on hand January 1, 1922..... \$ 9,016.86

MEDICAL DEFENSE FUND

RECEIPTS:	
Cash on hand January 1, 1921.....	\$ 1,526.21
Liberty Bonds January 1, 1921.....	5,000.00
Interest	212.50
Nothing received from General Fund on account of amount on hand being over \$6,000.00.	

\$ 6,738.71

DISBURSEMENTS:

Printing	\$ 22.30
Attorney fees.....	1,128.50
	1,150.80
Balance on hand January 1, 1922.....	\$ 5,587.91
Cash	\$ 587.91
Liberty Bonds.....	5,000.00

Respectfully submitted,
CHARLES N. COMBS, Treasurer.

THE TRUTH ABOUT MEDICINES

PROPAGANDA FOR REFORM

NUFORAL.—This is a preparation advocated for the treatment of tuberculosis by the Nuforal Laboratories, New York. From the available evidence it appears evident that the use of Nuforal as a treatment for tuberculosis is a commercial proposition, and that the treatment is distinctly in the experimental stage.—(*Jour. A. M. A.*, Jan. 7, 1922, p. 59).

HELIOTHERAPY AND RICKETS.—Evidence for the value of heliotherapy in rickets was presented years ago. This value has recently been verified by experiments on animals rendered demonstrably rachitic through dietary errors. When rats have an abundance of sunlight, they remain healthy under regimens which are sufficiently deficient in phosphorus to induce rickets in animals kept in subdued light. It has been shown that the changes produced by

sunlight on the skeleton do not differ in any important respect from the changes produced when animals are fed cod liver oil. Again, sun treatment of infants suffering from rickets not only brings about a cure of the rachitic lesions, but in so doing occasions chemical changes in the blood similar to those noted when the cure is effected by cod liver oil. Heliotherapy has thus in one case at least been put upon the scientific basis of demonstrable chemical changes in the organism affected.—(*Jour. A. M. A.*, Jan. 21, 1922, p. 195).

WESTERN MEDICAL ASSOCIATION TREATMENT FOR EPILEPSY.—The Western Medical Association, Chicago, is selling a mail-order treatment for the alleged cure of epilepsy. The A. M. A. Chemical Laboratory examined the "Treatment" and found the essential constituent to be phenobarbital (luminal). The Laboratory reports that the "Treatment" is sold in three boxes, A, B, and C. "A" contained tablets, each of which represented 0.66 gm. (1 grain) of phenobarbital (luminal). "B" contained tablets which are of the type sold by pharmaceutical houses as "digestive tablets" and contained pepsin, pancreatin and calcium lactophosphate. "C" contained tablets which gave tests for emodin-bearing drugs and for aloin. In addition to the epilepsy treatment, the Western Medical Association also sells a number of other nostrums for the treatment of various diseases. Apparently, two men are mainly concerned in operating the Western Medical Association, namely, Joseph B. Crevey and Dr. W. W. Lister, a physician.—(*Jour. A. M. A.*, Jan. 28, 1922, p. 296).

ANTIDOTE FOR PHENOL POISONING.—Sodium sulphate in strong solution is one of the best known antidotes for phenol poisoning. The action is not a chemical one. Alcohol is not an antidote for phenol poisoning. Experiments carried out in the U. S. Hygienic Laboratory showed that the toxicity of phenol was increased by alcohol. Alcohol is applied to the appendix stump after operation in the belief that it will neutralize the action of the phenol and thus prevent extensive sloughing of the tissues; but no doubt the action of the alcohol is simply that of diluting and washing away the phenol.—(*Jour. A. M. A.*, Jan. 28, 1922, p. 299).

PINUSEPTOL.—According to the catalog of Eli Lilly & Company, Pinuseptol is a "Pine Oil Disinfectant". The Bureau of Chemistry of the U. S. Department of Agriculture has investigated the general subject of the use of pine oil as a disinfectant. It reports that emulsions made from pine oil when freshly prepared give a Hygienic Laboratory phenol coefficient of from 3.42 to 4.34. It was found that pine oil emulsions failed to kill *M. aureus* and *B. anthracis*; and the government chemists conclude that these products should not be used for general disinfecting purposes.—(*Jour. A. M. A.*, Jan. 28, 1922, p. 299).

NEW AND NONOFFICIAL REMEDIES

Liquid Petrolatum-Squibb, Heavy (California).—A brand of liquid petrolatum-U. S. P., made from California petroleum and claimed to be composed essentially of hydrocarbons of the naphthalene series. For a description of liquid petrolatum, see the U. S. Pharmacopeia and Useful Drugs. E. R. Squibb & Sons, New York.

CHAULMOOGRA DERIVATIVES.—Chaulmoogra oil is a fixed (fatty) oil. In addition to small quantities of the glycerides commonly found in fats, chaulmoogra oil contains the glycerides of a series of highly unsaturated fatty acids, chiefly chaulmoogric acid and hydrocarpic acid. The therapeutic properties of chaulmoogra oil appear to be due to these unsaturated fatty acids. Chaulmoogra oil is used in the treatment of leprosy, the bulk of the evidence indicating

that it is of value though it does not have specific curative properties. Chaulmoogra oil is given by mouth or hypodermic injection. The sodium salts of the fatty acids of chaulmoogra oil and the ethyl esters prepared from these fatty acids have been used in the treatment of leprosy with claims that they are better tolerated than the oil.

CHAULMOOGRA OIL—OLEUM CHAULMOOGRAE.—For actions and uses, see the preceding article, "Chaulmoogra Derivatives". The dose is 0.3 Cc. (5 drops) in capsules, three times daily, the dose being increased to the point of tolerance. For hypodermic injection it has been used mixed with olive oil.

CHAULMESTROL.—Ethyl esters of the fatty acids of chaulmoogra oil. For a discussion of the actions and uses, see the preceding article, "Chaulmoogra Derivatives". Orally, chaulmestrol is administered in gradually increasing doses of from 1 Cc. to 5 Cc. Intramuscularly, 1 Cc. is the initial dose. The Bayer Company, New York (Winthrop Chemical Company, Inc., New York, distributor).—(*Jour. A. M. A.*, Jan. 14, 1922, p. 111).

Food Allergens-Squibb.—Powders representing the protein of foods. For action, uses and dosage, see general article, "Biologically Reactive Food Proteins", New and Nonofficial Remedies, 1921, p. 65. The following allergens have been accepted: Almond Allergen-Squibb, Barley Allergen-Squibb, Brazil-Nut Allergen-Squibb, Buckwheat Allergen-Squibb, Butter-nut Allergen-Squibb, Chestnut Allergen-Squibb, Corn Allergen-Squibb, Filbert Allergen-Squibb, Hazelnut Allergen-Squibb, Hickory-Nut Allergen-Squibb, Oat Allergen-Squibb, Peanut Allergen-Squibb, Pecan Allergen-Squibb, Rice Allergen-Squibb, Rye Allergen-Squibb, Walnut (Black) Allergen-Squibb, Walnut (English) Allergen-Squibb, Wheat Allergen-Squibb, Apple Allergen-Squibb, Artichoke Allergen-Squibb, Asparagus Allergen-Squibb, Banana Allergen-Squibb, Blackberry Allergen-Squibb, Black Pepper Allergen-Squibb, Bean (Lima) Allergen-Squibb, Bean (Navy) Allergen-Squibb, Bean (String) Allergen-Squibb, Beet Allergen-Squibb, Cabbage Allergen-Squibb, Cantaloupe Allergen-Squibb, Carrot Allergen-Squibb, Celery Allergen-Squibb, Cherry Allergen-Squibb, Coffee Allergen-Squibb, Cucumber Allergen-Squibb, Eggplant Allergen-Squibb, Grape Allergen-Squibb, Grapefruit Allergen-Squibb, Lettuce Allergen-Squibb, Mustard Allergen-Squibb, Onion Allergen-Squibb, Orange Allergen-Squibb, Parsnip Allergen-Squibb, Pea Allergen-Squibb, Peach Allergen-Squibb, Pear Allergen-Squibb, Plum Allergen-Squibb, Potato (Sweet) Allergen-Squibb, Potato (White) Allergen-Squibb, Prune Allergen-Squibb, Radish Allergen-Squibb, Raspberry Allergen-Squibb, Rhubarb Allergen-Squibb, Spinach Allergen-Squibb, Squash Allergen-Squibb, Strawberry Allergen-Squibb, Tomato Allergen-Squibb, Turnip Allergen-Squibb, Watermelon Allergen-Squibb, Beef Allergen-Squibb, Bluefish Allergen-Squibb, Chicken Allergen-Squibb, Clam Allergen-Squibb, Codfish Allergen-Squibb, Crab Allergen-Squibb, Goose Allergen-Squibb, Haddock Allergen-Squibb, Halibut Allergen-Squibb, Horse Allergen-Squibb, Lamb Allergen-Squibb, Lobster Allergen-Squibb, Mackerel Allergen-Squibb, Mutton Allergen-Squibb, Oyster Allergen-Squibb, Pork Allergen-Squibb, Salmon Allergen-Squibb, Shrimp Allergen-Squibb, Sweetbreads Allergen-Squibb, Turkey Allergen-Squibb, Veal Allergen-Squibb, Milk (Cow) (All Proteins) Allergen-Squibb, Milk (Goat) (All Proteins) Allergen-Squibb, Milk (Human) (All Proteins) Allergen-Squibb, Milk (Cow) (Casein) Allergen-Squibb, Milk (Cow) (Albumin) Allergen-Squibb, Egg (White) (All Proteins) Allergen-Squibb, Egg (Yolk) (All Proteins) Allergen-Squibb, Egg White Albumin Allergen-Squibb, Egg (Whole) (All Proteins) Allergen-Squibb, Wheat

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Ischemia follows promptly the use of 1:10000 Suprarenalin Solution slightly warmed (make 1:10000 solution by adding 1 part of Suprarenalin Solution to 9 parts of sterile normal salt solution).

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Elixir of Enzymes is a potent and palatable preparation of the ferments active in acid environment—an aid to digestion, corrective of minor alimentary disorders and a fine vehicle for iodides, bromides, salicylates, etc.

As headquarters for the organotherapeutic agents, we offer a full line of Endocrine Products in powder and tablets (no combinations or shotgun cure-alls).

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NEOCINCHOPHEN-ABBOTT.—A brand of neocinchophen-N. N. R. For action, uses and dosage, see New and Nonofficial Remedies 1921, p. 86. The Abbott Laboratories, Chicago.—(*Jour. A. M. A.*, Jan. 21, 1922, p. 192).

BOOK REVIEWS

ARTERIOSCLEROSIS AND HYPERTENSION WITH CHAPTERS ON BLOOD PRESSURE. By Louis M. Warfield, A.B., M.D. (Johns Hopkins), F.A.C.P.; formerly Professor of Clinical Medicine, Marquette University Medical School; Chief Physician to Milwaukee County Hospital; Associate Member Association American Physicians; Member American Association Pathologists and Bacteriologists; American Medical Association, etc., Fellow American College of Surgeons. Third Edition, Cloth, pp. 265. Price \$4.00. Published by C. V. Mosby Company, St. Louis.

For a condensed volume on this important subject, it would be difficult indeed to find a more satisfactory digest of facts than obtains in this new edition of Dr. Warfield's admirable book. Arteriosclerosis is here considered not so much as a disease with a definite etiologic factor as it is a degenerative process affecting the vascular system, following a variety of causes, the most characteristic causal factor being lues.

Much has been added to the chapter on blood pressure and the section on cardiac irregularities is both new and satisfying.

The subject of treatment alone is sufficiently comprehensive, yet withal terse, that it alone should win a place for the volume in the library of anyone interested in the subject of cardio-vascular diseases.

EPIRAIM McDOWELL—"FATHER OF OVARIOTOMY" AND FOUNDER OF ABDOMINAL SURGERY—with an appendix on JANE TODD CRAWFORD. By August Schachner, M.D., F.A.C.S., Louisville, Kentucky. Octavo volume of about 350 pages. Attractively printed and profusely illustrated with plates in double tone. Price \$5.00. J. B. Lippincott Company, Publishers, Philadelphia and London.

The author has given us an excellent history of the life and work of Ephraim McDowell. He has also given us the first history of Jane Todd Crawford—the woman who made McDowell's first ovariotomy a possibility.

McDowell's life story has been too long neglected and it behooves every American surgeon to read this book by Schachner. We can justly claim that

McDowell is, in a sense, the Father of Abdominal Surgery. As the author states he "emphasized the possibility of invading the peritoneal cavity" and thus "he laid the cornerstone for the most brilliant domain of surgery".

Schachner maintains that had McDowell lived under the shadow of a great university he would never have been the first ovariotomist. "It was McDowell's frontier location on the very fringe of civilization, where freedom and self reliance reigned supreme, that made the first ovariotomy possible."

The Reviewer was rather saddened to learn that the generally accepted story, that an angry mob surrounded the house and threatened McDowell's life while he performed his first operation, is purely a myth. Of course, at the time of the operation, there was considerable excitement in the village of Danville and "a preacher from the pulpit called attention to the fact that Dr. McDowell was attempting an impossible thing, and in the event of the woman's death he would be a murderer".

Good taste and modesty should have dictated the exclusion of the foot-note on page 39 wherein the author, by indirection, compares himself to John Bell of Edinburgh.

ESSAYS ON SURGICAL SUBJECTS. By Sir Berkeley Moynihan, K.C.M.G., C.B., Leeds, England. Octavo of 253 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1921. Cloth, \$5.00 net.

This charming book is a collection of addresses, lectures, and essays that have been published at various times during the last few years. The author dedicates the volume "To Dr. W. H. Mayo, Dr. C. H. Mayo and my friends at the Mayo Clinic. A small acknowledgment of a great debt." The first essay is the well known Murphy Memorial Oration which is already familiar to many American readers. The second essay is entitled "The ritual of a surgical operation" and it should be read by every surgeon. Most of us will readily admit the truth of the statement that "every operation in surgery is an experiment in bacteriology". There follow essays on "The Diagnosis and Treatment of Chronic Gastric Ulcer", "Disappointments After Gastro-enterostomy", "Intestinal Stasis", "Acute Emergencies of Abdominal Disease", "The Gifts of Surgery to Medicine", "The Surgery of the Chest in Relation to Retained Projectiles" and "The Most Gentle Profession". Probably the most interesting of these essays is the one entitled "The Gifts of Surgery to Medicine" which was the annual address in surgery delivered before the British Medical Association. It is obvious that Moynihan is an admirer of American medical men.

VICE AND HEALTH. PROBLEMS—SOLUTIONS. By John Clarence Funk, Director Bureau of Protective Measures, Pennsylvania State Department of Health, Scientific Assistant U. S. Public Health Service. Philadelphia and London: J. B. Lippincott Company. Price \$1.50.

This book of 174 pages is dedicated to the League of Woman Voters. It has a yellowish-green cover with the legend, in red, "How to Put the Red Light On". The book may be described by the stock phrase, "Well written". It deals with the different aspects of prostitution, but develops no new theories. It should most certainly be read by those to whom the author has directed his appeal.

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THE JOURNAL OF THE Indiana State Medical Association

Owned, Published and Controlled by the Indiana State Medical Association

ISSUED MONTHLY under the Direction of the Council

Volume XV
Number 3

FORT WAYNE, IND., MARCH 15, 1922

Per Year, \$3.00
Single Copy, 30 Cents

CONTENTS

ORIGINAL ARTICLES

PAGE

Functional Diseases of the Nervous System in Soldiers and Civilians. Chas. G. Beall, Fort Wayne	75
Foreign Bodies Within the Respiratory Tract. Maurice H. Krebs, Huntington.....	78
Group Medicine Diagnosis. Leon L. Solomon, Louisville, Kentucky	85
The Physician. Duty Toward the Psychological Development of Childhood and Youth in the Home. Frank B. Wynn, Indianapolis	90

SPECIAL ARTICLE

The Dangers and Duties of the Hour. Hobart A. Hare, M.D., Professor of Therapeutics and Di- agnosis in the Jefferson Medical College, Phila- delphia, Pennsylvania.....	93
--	----

EDITORIALS

PAGE

Growing Old Gracefully.....	96
Figures Never Lie—But Figurers Do.....	97
The St. Louis Meeting of the American Medical Association	97
Editorial Notes.....	98

DEATHS

Samuel A. Kennedy, Indianapolis; William H. Banks, Waymansville; Henry W. Jones, Spice- land; W. N. Williamson, Indianapolis; William P. Kochenour, Rego; Oliver F. Gray, Spencer; Samuel F. Voris, Columbus; Charles C. Givens, Lewis	103
---	-----

(Continued on Advertising Page VIII)

Next Annual Session, Muncie, September 27, 28, 29, 1922. List of Officers and Committees on Adv. Page 2.
Entered as Second Class Matter, January 20, 1908, at the Postoffice at Fort Wayne, Indiana, under Act of
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ALBERT E. BULSON, Jr., B.S., M.D., Editor and Manager

OFFICE OF PUBLICATION: 406 West Berry Street, FORT WAYNE, INDIANA

VOLUME XV

MARCH 15, 1922

NUMBER 3

ORIGINAL ARTICLES

FUNCTIONAL DISEASES OF THE NERVOUS SYSTEM IN SOLDIERS AND CIVILIANS.*

CHAS. G. BEALL, M.D.
FORT WAYNE, INDIANA

It has been maintained that there is no such thing as a pure "neurosis", that there is always an organic or chemical change in the body giving rise to all signs and symptoms. The present tendency is to explain many symptoms, and symptom complexes, on the ground of disturbances of the function of the glands of internal secretion. We must not be conceited enough to believe that our present age originated this attractive theory, as the Greeks many centuries ago believed that the uterus had much to do with a certain functional nervous disease. In fact the name of this organ is given to the disease—hysteria. Another modern explanation for what many of us are wont to call functional nervous diseases is that they are dependent on disturbances of the sympathetic nervous system, of which we probably know less than of the glands of internal secretion. I do not mean to belittle these theories, because they stimulate much work, both experimental and clinical. Focal infections have likewise come in for their share of blame, and at times very properly, but many teeth and tonsils have been sacrificed needlessly, and subsequent events have proven that I have been the high executioner in not a few instances. At this point permit me to digress for a moment and call your attention to the fact that early in the lives of some of us the text books grouped together under the title of "functional nervous diseases", what to us are strange bedfellows. The older classifications included diseases which we no longer regard as functional, and there was a distinct tendency to group cases under the predominating symptom or the organ which apparently gave rise to the subjective symptoms. As an illustration of this I quote the following chapter heads from

"Functional Nervous Disorders" by C. J. Jones, 1870: Tetanus; Chorea; Puerperal Convulsions; Acoustic Neuroses; Pulsation of the Abdominal Aorta; Uterine Neuroses.

Bacteriology has removed some from this classification, a better knowledge of the function of the glands of internal secretion has removed another, and chemistry has removed another. The modern conceptions and present experimental methods may, and undoubtedly will, remove others. I take it that the modern conception of a functional nervous disease is one in which certain, usually subjective, sensations are present, for which, after a very thorough examination, no definite explanation can be offered.

In the last seven hundred cases examined in my office, approximately one out of seven cases came under this general heading, the various types being as follows:

Pseudocyesis, 0.1%; intestinal neurosis, 1.7%; neurasthenia, 1.5%; neurosis (not defined, including anxiety neuroses, traumatic neuroses spasmodic tic), 8.4%; hypochondriasis, 0.87%; psychasthenia, 0.28%; hysteria, 1.4%. This proportion of cases is probably rather high for the reason that I see most of the ex-soldiers in our district who have functional or organic nervous diseases. It may be said that some, or possibly all, of these cases have some undiscovered organic basis, but each one received a thorough study and the diagnosis was not made when any evidence of organic disease was found.

The importance of using every means of excluding organic disease cannot be too strongly emphasized. This must include a careful history, a thorough and complete physical examination, and such modern laboratory examinations as are indicated. A brief review of the predisposing factors may not be out of place. Heredity, no doubt, plays an important part. How often do we find in the family history that the father or mother was "very nervous", but on the other hand, histories of definite psychoses in the parents is rather rare. Probably the chief, predisposing factor is a recent acute infectious disease. How often do we hear "ever since I had the 'flu', " "flu" of course

*Read before the Medical Section of the Indiana State Medical Association at the Indianapolis session, September, 1921.

covering a multiplicity of acute infections. Trauma, both physical and mental, is the starting point in many cases. The physical traumas, of course, play a great part as an etiological factor in soldiers for two reasons; first, the unusual nature of the trauma; and, second, the individual was probably exhausted physically, and also under great mental strain when the trauma occurred. It is a rather prevalent opinion that soldiers suffer from altogether different types of functional nervous disorders than civilians, but such has not been my experience, with one exception, and that is the extreme type of traumatic neurosis. Physical traumas occurring in civilian life can produce the same effects, even when they are non-litigation injuries. Surgical operations are a not uncommon source of this type. Of course, an ill advised operation on an already neurotic individual is sure to lead to disaster, but, at times, we see neuroses following imperative surgical procedures. Of the psychic traumas, deaths of near and dear relatives and prolonged mental strains are frequent predisposing factors. I believe that lack of variation in work has to do with producing neuroses in males of keen mentality in a vast majority of cases. We have Freud to thank for presenting to us, forcibly, the part that repressed wishes and desires have in inducing subjective sensations. I want to preceed what I next say with the emphatic statement that true malingering has been exceedingly rare in my experience, but the subconscious knowledge in either soldier or civilian that disease or injury is compensable is a factor in bringing a latent neurosis to full life and maintaining it. One more factor must be spoken of, and it is of great importance because it is preventable. I refer to suggestion. It not infrequently happens that a young male will become conscious of an extra systole, or a few forcible heart beats. He goes to a physician for advice, and because the nature of the subjective sensation is not understood, or because there is a soft systolic murmur, the patient is told he has heart disease and a neurosis is established which may take a year or longer to recover from. Gastro-intestinal symptoms dependent on constipation, faulty habits of eating, or lack of exercise may arouse the suspicion of cancer or ulcer, and if the patient receives a hint of this, the uncertainty and doubt which is established upsets the balance wheel.

Obviously to establish the diagnosis of a functional nervous disease means a thorough study of the case. The doctor who has probably watched the individual develop from childhood, knows his family life, and has cared for his or her parents, has a better insight into the predisposing factors than anyone else. As the diagnosis is based largely on exclusion,

only general statement can be made in regard to methods. Brown-Squared, in his lectures on "Functional Nervous Affections" published in 1868, states that the distinguishing characteristics of a functional nervous affection are "great variability in the intensity of the symptoms, and regular or irregular attacks, with intervals of almost perfect health between these attacks." The minor stigmata of hysteria such as conjunctival anaesthesia, loss of pharyngeal reflex, areas of anesthesia, or contraction or inversion of the color fields are not infrequently encountered. The effort test, i.e., noting the pulse rate at rest, after fifty hops, and after two minutes' rest, will differentiate a neurocirculatory asthenia, but it may require a determination of the basal metabolism to differentiate this from a hyperthyroidism. Rapid exhaustion, following physical or mental effort in an individual who looks well, is suggestive.

The first step in the treatment of functional nervous diseases is the establishment of a definite diagnosis, and where this is done the confidence of the patient has been gained and then the condition should be explained in the simplest of terms and confident assurance that a cure can be obtained. The details of treatment will follow three general lines, the moral, physical and last, and least, medication. A definite congenial occupation is a prime necessity, and even an uncongenial occupation may be made more acceptable by varying it with intervals of a change of work. Only in exceptional cases is it advisable to have the individual stop work, and when this is necessary it should not be for prolonged periods and this applies especially to soldiers. For instance, the office man may be induced to become an amateur farmer or florist out of hours, or the mechanic may be induced to take up a correspondence course. In the case of a woman the problem is a more difficult one, and often taxes the ingenuity of the physician to the utmost. While for the well-to-do patient, hydrotherapy in well appointed establishments is available, yet much benefit can be derived from the more simple home hydrotherapy. Warm and cold sponge baths and salt baths followed by vigorous rubs can be taken in any home. The exercise and increase of moral tone induced by competitive and semi-competitive games are of immense benefit. Stated rest periods for women "whose work is never done" are of as much importance as the outdoor exercise for the "desk" man. In the gastro-intestinal neuroses an abdominal support, whether it corrects a visceroptosis or has some other obscure influence is well worth trying. Of dietary modifications I will mention but two, because of their importance. First, an effort should be made to increase the under-weight individual, and, second, it is ten times

better to correct the frequently co-existing constipation by diet than by drugs, though these may be temporarily necessary. A list of drugs used in the treatment of functional nervous diseases would include almost the entire pharmacopeia, and the list is being added to each year. A few non-narcotic nerve sedatives have stood the test of time, and of these the bromides are probably the most important. In this connection it is well to remember that most potassium salts are more toxic and depressant than the salts of other metals, and had best be avoided. Our forefathers found out empirically that belladonna was of benefit in certain nervous disorders. We now have possibly more rational grounds for its use, as Eppinger and Hess have apparently shown that certain so-called "nervous individuals" suffer from a sensitization or hyperexcitability of the vagotonic system, and atropine lessens this excitability. I hesitate to say anything about glandular therapy because I have been unable to clearly establish in my mind the indications for their use, in spite of rather close study of current literature and a good deal of experimental administration. To be perfectly frank, I recall but one case in which the results were highly satisfactory, and I am unable to explain the rationale in this case. Fortunately, with the exception of thyroid substance, none of them so far as I know do harm, so clinical experimentation is safe. In these clinical experiments, in order that they may be of real value, the various gland substances had best be used singly or at most in combinations of not more than two.

In conclusion it can be said that for the successful treatment of functional nervous disorders the physician must have a broad knowledge of clinical medicine, much patience, and a good fund of common sense.

DISCUSSION

DR. W. D. ASBURY (Terre Haute): I have been trying to make a study of these functional cases, and it is very difficult to satisfy one's self about some of these things. Just recently I had a case that I had occasion to go over, since Dr. Beall asked me to discuss this paper, in which I had to make a diagnosis of neurasthenia. I went back and tried to work out that case better because I always hesitate to make such a diagnosis. This case is a pulmonary tuberculosis with the so-called functional syndrome.

I would insist that we, as medical men, especially those of us that are trying to do internal medicine, have our patients strip and go over them thoroughly so that we may hear every sound of the lungs, and we should spend at least an hour on such patients. I think we cannot properly examine a patient in less time than that. It may be that in some of these

functional cases we may not be able to find anything definite, as in the cases Dr. Beall has mentioned. I do think that in these psychic and mental types there is something, somewhere back in their lives, consciously or subconsciously, which is responsible for the present symptoms. If we could go back and find the little thing, the repressed wish or desire that eventually creeps out and produces all these symptoms; and if we were astute enough to analyze it and bring it out, we might be able to help some of these patients. By knowing their mental qualities we might be able to get rid of some of the unsatisfactory diagnoses which we are forced to make.

In regard to treatment, the best thing is to take the individual out of his environment and let him become so interested in something which he wants to do that there will be no time to think of himself, and thus he may develop vision and mental stamina enough to go through life without great handicap.

DR. CHARLES D. HUMES (Indianapolis): Shortly after my return from France, I published a very short paper covering several thousand cases of "shell shock" under the title of psycho-neurosis, manifesting psychoses, paraplegia, monoplegia, mutism, deafness, hysterical contractures, etc.—one big classification. I thought it was easy to cure them, as conditions existed in France. Out of Chateau Thierry we received eight hundred men who could not walk or talk, who had tremors and all that. Within two weeks all but fourteen of them were back in the line *being shot at for eighty cents a day*. How did we do it? We talked to the men and got to know them, know where they came from, and so on, following the motto of "Get your man,"—know where he comes from, get his confidence, find out what happened—was he blown into the air, did he sleep in the mud for a couple of hours before he was found, did he nearly drown in a concealed shell hole—get his story from him. Then you become acquainted with his experience, and as he unfolds, you carefully replace the unpleasant part with a satisfactory explanation, which has for its purpose *making the cure a mentally painless one*.

There is a particular type of functional disorder which has an organic manifestation, described by Babinski. I could not believe that a man could have a functional disorder with organic manifestations until I saw a soldier diagnosed Raynaud's disease, with his arm utterly helpless in a sling. *With the stage all set*, we examined this man who could not move his right arm, and I suddenly saw in moving his left arm that function had returned in the right. Then I began treatment, talked to him and told him anything I thought would help—I believe you are justified in telling a patient

anything if you are honest—so I told that patient of the cures of others and had him recovering, using his arm and hand slightly, when one day an officer (regular) came through the ward and roughly said: "How many malingerers have you got in here?" Back came the swelling in the boy's arm and today he is in the government hospital with all those original symptoms. That is purely an arrest of the voluntary cerebral center manifesting loss of motor function with profound vaso motor paralysis, swelling, blueness and coldness of extremity.

DR. CHARLES G. BEALL (Fort Wayne) (closing): In closing I have just a little heart to heart confession to make. When I have finished a case, or think I have, I always try to come to some definite conclusion and put down a definite diagnosis, but sometimes that has to be "unknown." I have a card in my desk which means mistaken diagnosis. I do not mean to say that I know all the cases in which I have been mistaken, but whenever I find that I have been mistaken, I put that case down. I am not going to say how many I am mistaken in, but approximately one-half of the cases in which I have been mistaken are those in which I have put down the diagnosis in the psychoneurotic group.

FOREIGN BODIES WITHIN THE RESPIRATORY TRACT*

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In presenting this subject before this section, the essayist is mindful of the fact that his own personal contribution to this special field of medicine has indeed been comparatively small. The writer's interest was forcibly attracted to and his attention held by several personal instances of obscure, severe and long standing pathologic pneumonic conditions, which were cleared up entirely in so far as their etiological factors were concerned, and in which the subsequent therapeutic measures, along practically new lines, were productive of remarkable results.

Even a casual excursion into any field of medicine reveals the regrettable fact that we sometimes fail to make any diagnosis, and that not infrequently our mistakes in diagnosis are revealed upon the autopsy table. Cabot of Boston has given us ample testimony as to the accuracy of this statement. This in part is due to our failure to avail ourselves of the most modern methods of arriving at a positive diagnosis. The employment of the radiograph,

fluoroscope, the bronchoscope and its adjuvants, has to an enormous extent aided in the diagnosis of pathological changes in the lungs, clarified their etiology, and pointed toward a more direct therapy. However, even very recent medical literature is replete with records of lung and bronchial affections following the inspiration of foreign bodies, the presence of which were either unsuspected or undiagnosed.

Broadly speaking, a foreign body within the respiratory tract should be considered as anything which normally does not belong there. Here should be included almost every conceivable substance, whether metal, mineral, vegetable or animal. Immediately upon the inspiration of a foreign body, or shortly thereafter, symptoms appear in accordance with the size, shape, chemical composition, character, position and point of lodgement. Here permit me to say that a diphtheritic membrane, laryngeal or bronchial, should always be regarded as a foreign body, which by location, shape and size may produce marked dyspnoea and often fatal asphyxia. A foreign body retained for any length of time may act as a mechanical irritant *per se*, and having reached a final point of lodgement, produce a slow destruction of surrounding tissue as the result of chemical changes, pressure necrosis, or bacterial invasion accompanying the foreign body. While this is true in the vast majority of cases, to prevent controversy, it should also be stated that there are a number of authentic records of foreign bodies *in situ* for even months and years, leaving no pathology which can be demonstrated by radiograph or physical signs.

The symptoms of cough, fever, dyspnoea, hemoptysis, sweats, loss of flesh and strength and so forth, all give a syndrome pointing toward tuberculosis, and after a study of the literature, and from my own personal observation, I am fully in accord with Boyce in believing that there have been a considerable number of authentic and recorded cases of supposed tuberculosis in which unsuspected foreign bodies were coughed up, or removed, with resultant cure. The earliest report that I have been able to find is that of Dr. Arnot, who in 1742, before the Obstetrical Society of Edinburgh, gave the history of a case of consumption cured after coughing up a bone. In 1786, Wells, in the *London Medical Journal*, gave the history of a case of pulmonary consumption in which all the symptoms were suddenly relieved by the expectoration of a carious bone, and the patient went on to a rapid recovery. Through the succeeding years others have reported similar instances.¹ It is not within the scope of this paper, nor do I desire to burden you with the citing of these early cases. I have appended a bibliography and reference for those who are

*Read before the Section on Medicine of the Indiana State Medical Association at the Indianapolis session, September, 1921.

sufficiently interested. It should be noted, however, that before the advent of the x-ray, the fluoroscope, and the bronchoscope, these foreign bodies evidenced themselves only through cough, expectoration, the breaking down of tissue or post mortem. Since the more frequent use of the above aids, there are a great number of records of foreign bodies within the respiratory tract which have caused pathological conditions closely simulating tuberculosis, and which conditions cleared up promptly with the bronchoscopic removal of the foreign body.

Killian, Jackson, Mosher and others have remarked upon the rapid recovery of lung tissue, even when the suppurative process had extended over a long period of time with large areas involved. In 1913 Jackson reported a very interesting case in which a glass collar button had been retained in the lung for twenty-six years. At the time of the removal of the collar button by bronchoscopy, this woman had as a result of her septic condition been reduced in weight to ninety-eight pounds. In two years she had regained perfect health and normal weight. In March, 1919, Jackson, commenting on this case, reported her weight as one hundred and eighty-two pounds.

Mr. J. W. B., fifty-eight years old, had for a year and one-half been suffering with a chronic bronchitis, with very severe exacerbations from time to time. He had been under treatment in a sanitarium, and had improved considerably. Recurrence of his bronchitis resulted in a fluoroscopic examination which showed a darkened area about the root of the right lung, which was attributed to calcified glands. Finally a radiogram was made which showed a foreign body. This was removed by Jackson, and proved to be the metal tip of an atomizer, which the patient recalled having used. Prompt recovery followed.

Under my own personal observation, came a patient of Dr. W. F. Smith, of Huntington. John W., a boy of fourteen, had for years been suffering with a constant cough with purulent expectoration in large quantity. At the age of six he had a pneumonia, but did not make a good recovery. His cough continued, and he expectorated large quantities of very foul smelling pus. His symptoms and physical signs were very suggestive of a pulmonary tuberculosis with abscess cavity. Frequent examinations of his sputum failed to show tubercle bacilli. His guardian, hearing by accident of another patient being cured of a similar condition by the finding and removal of a foreign body from a lung, remembered that John at the age of four was supposed to have swallowed a collar button, although there were no immediate symptoms, and it was supposed that the button had passed into the stomach and then

on through. A fluoroscopic examination followed by a radiogram, immediately disclosed the button, which was removed by Jackson, with the resultant prompt cure of his condition.

In support of the belief that foreign bodies in the respiratory tract be removed as soon as possible after discovery, I desire to refer to one case reported by Jackson in the Mutter Lecture before the College of Physicians of Philadelphia in 1917. In doing so I want to pay my personal respects to the pioneer in America in this work. Those of us who have been so fortunate as to see Chevalier Jackson in action, have often marveled at his uncanny skill and dexterity. The case just referred to was that of a woman who for many years went seeking health from sanitarium to sanitarium for what was diagnosed as pulmonary tuberculosis. She was brought into the hospital almost dead from repeated hemorrhages and sepsis, as the result of an open safety pin, which was present in the right bronchus. The presence of this safety pin had been known to her physician five years previous, when a radiograph was made, but he had advised against its removal, preferring "to let well enough alone." Jackson made no attempt to remove this pin at the hospital, owing to the patient being in *extremis*, dying the next day.

To intelligently interpret the pathological processes and their production in the respiratory tract by foreign bodies, one must constantly have in mind its anatomy and physiology. Time will permit me to recall to your attention only a few features of the gross anatomy and gross physiology, only enough to serve as a basis for my remarks. At this time let us leave out of consideration the mouth and pharynx, and visualize with me a tube beginning as the larynx, continuing as the trachea, and then bifurcating into a right and left bronchus, the right bronchus dividing itself into three smaller bronchi to serve the upper, middle and inferior lobes of the right lung, the left bronchus dividing itself into two smaller bronchi, to serve the superior and inferior lobes of the left lung; that when these smaller bronchi enter the various lobes, this division and subdivision into smaller and smaller bronchi and bronchioles continue almost to the periphery of each lobe, the entire process in completion, being likened to a tree with its numerous branches and stems, therefore appropriately known as the laryngotracheo-bronchial tree. As a result of this anatomical arrangement, it is evident that each bronchiole serves, brings air to, and drains only a small roughly triangular portion of lung tissue. At the upper end of the larynx we have the vocal chords, whose approximation in the median line and free movement gives rise to phonation, as the direct result of a column of air from below, setting them in vibration. This

presupposes that nerve and other conditions are normal. The gross physiological function of the laryngeo-tracheo-bronchial tree is that of providing a mechanical means for respiration. In addition the entire bronchial tree acts as a means for drainage of secretions, the act of drainage being facilitated to some extent by the upward movement of the mucosal cilia.

Now visualize a foreign body lodged for a length of time anywhere within the respiratory tract. We note the possibility of a stenosis, either partial or complete, depending upon the size, shape and manner of lodgement. If the foreign body be lodged above the bifurcation, there is a greater probability of interference with respiration than if it be situated below the bifurcation, since in the latter event one lung would still be receiving air—in fact would gradually become compensatory in function and action. Yet very large objects like coins and pieces of bone, large enough in themselves to completely block off the respiration, have lodged in the larynx or in the trachea, but owing to their position have allowed air to pass by. In the larynx, especially high up, the foreign body may produce difficult and painful deglutition and cause interference with the voice amounting sometimes to a total aphonia.

The foreign body may lodge in one of the main bronchi or pass into one of the smaller bronchi or bronchioles until it has found a place of lodgement. Wherever that may be, some local pathology will ensue. The foreign body, *per se*, acts as a mechanical irritant. It may react chemically toward the tissue, or the secretions may cause corrosion of the object, roughening its surface, thus further increasing its irritative effects. Acute inflammatory conditions may be set up by the movement of the foreign body by respiratory activities, until it has become more firmly imbedded. In this movement, especially if the object be pointed or sharp, the lining membrane may be traumatized and saprophytic bacteria introduced beneath the mucosa. The lumen may be occluded, the stenosis being complete or partial; if complete stenosis, the roughly triangular portion of lung served will be practically "corked up"—air shut off—a condition of atelectasis, the secretions dammed back, and that part of the lung may be "drowned in its own secretions"; if partial stenosis, there will be some interference with drainage, inflammation, granulation tissue, further increase of the stenosis, a bronchitis, dilatation of the bronchus,—a condition of bronchiectasis. There may be the production of a pneumonia or broncho-pneumonia, the latter more frequent in young children. We may have an interlobular emphysema, the result of trauma, and of powerful efforts at inspiration, the air entering the connective tissue of the

septa between the lobules of the lung. Or we may have a vesicular emphysema, which is really a compensating phenomenon, and it means that if one lung or a part of one lung is so changed by pathological conditions, that it can only partially perform its functions, the other lung becomes increased in size and its air spaces are dilated. In my opinion this form of emphysema should not be regarded as a morbid condition. This change in the lung is a healthy one—an act of compensation. It produces no symptoms of disease, although it can readily be detected by physical signs and auscultation. In the same way, but on a smaller scale, whenever portions of the lung are consolidated by chronic changes, in other portions we find areas of dilated air spaces. Further pathological conditions produced are that of abscess cavities, pneumothorax, pyopneumothorax, haemothorax, empyema, and gangrene.

To Dr. H. L. Lynah of New York belongs the credit of calling attention to the presence of diphtheritic membrane, either primary or secondary, within the trachea or bronchi, and the treatment of tracheo-bronchial diphtheria bronchoscopically. I am indebted to him for the substance of the following remarks. In a paper read in 1916 he conclusively showed that a diphtheritic membrane may be lodged within the trachea or bronchus and act as a foreign body, occupying a part of or the entire lumen, thus partially or completely obstructing respiration. The resultant condition is sometimes erroneously diagnosed as a broncho-pneumonia. Lynah believes that not infrequently these cases are primary. They are accompanied by marked dyspnoea and cyanosis and give the physical signs of bronchial stenosis. Inasmuch as in these conditions no nasal, tonsillar or pharyngeal exudates are present, cultures from the throat for the bacillus of diphtheria are negative. The clinical picture is that of a gradual onset, slight occasional cough and roughened breathing. It resembles a slight cold. With such a slight symptomatology, many of these conditions are overlooked, unless a membrane is coughed up, or the larynx becomes involved followed by a typical attack of "croup." As the obstruction continues there is a marked emphysema of the lung in which the bronchus is obstructed, the foreign body acting as a valvelike mechanism, permitting more air to enter the lung than can escape. Lynah states that inspection shows a barrel shaped chest on the side involved, retraction above the clavicle and in the sternal notch, and sinking in of the epigastrium. Cyanosis of the finger tips is a constant sign. The percussion note is that of increased resonance. Auscultation reveals diminished or absent respiratory sounds of the affected side, especially when compared with the harsh

breathing of the other side. Rales of all kinds may be present. There is also sometimes present that peculiar "flapping" sound produced by air passing back and forth over the flapping membrane, when the membrane is partially loose. These cases become very clearly defined, because they are unsuccessfully intubated with the longest O'Dwyer tubes, indicating that the membrane or maybe edema is below the lower end of the tube. The treatment of these conditions is early recognition, antitoxin, and prompt removal by direct tracheoscopy or bronchoscopy. I have no faith in tracheotomy where intubation with the longest O'Dwyer tube has failed. I admit of necessity, that one can through a tracheotomy opening swab the territory below, and occasionally insert a forceps and bring up a membrane. But that is working blindly, and in the dark, and is unscientific. I am in accord with Lynah in believing that when a tracheotomy in a case of tracheo-bronchial diphtheria is not successful because the longest O'Dwyer tube is not long enough to reach below the obstruction, that tracheoscopy or bronchoscopy with removal of the foreign body membrane is indicated. This removal can be effected by forceps or suction through the bronchoscope, the suction being applied through a metal tube connected with one of the various electrically driven vacuum pumps. With the use of the forceps there is a greater tendency toward bleeding. With the suction method, there is less liability for this to take place. The bronchus should be swabbed with antitoxin. The risk of this procedure either in children or in adults in these cases is slight. No anaesthesia, local or general, is required. This treatment by Lynah has proved of inestimable value as shown by the records of Willard Parker and Kingston Hospitals in New York City.

The symptomatology, physical signs and diagnosis of foreign bodies within the respiratory tract, depend upon the character of the object, and whether it be lodged within the larynx, trachea or bronchi. Within the time limit it is absolutely impossible for me to classify the various foreign bodies, and to differentiate their symptomatology and physical signs in accordance with their location. I can refer only to the most prominent features which should direct suspicion toward the presence of a foreign body.

At the time of inspiration of a foreign body there are usually immediate symptoms of irritation, obstruction, strangling, laryngeal spasm, and violent efforts of coughing to expel the intruding object. There are a number of instances in which there were no immediate symptoms of any kind at the moment of inspiration. As the foreign body passes downward, or is pushed down by digital examination or attempts

at removal, the alarming symptoms of obstruction and strangulation are apt to grow less and even disappear, causing the erroneous belief that the object had been in the oesophagus and had passed into the stomach. Here I should call your attention to the anatomical condition of the lumen of the trachea being larger than that of the larynx, so that an object within the larynx, causing alarming symptoms of obstruction, may readily pass into the trachea with marked improvement in respiration with partial or even total subsidence of initial symptoms. Additional symptoms may be pain localized at the point of lodgement, painful and difficult swallowing and impairment of voice.

When the object has passed into the trachea, the violent initial symptoms usually subside, and the patient is left with a "wheezing" respiration, or there may be a "flapping sound," which is usually distinctly heard over the trachea and a cough which comes on in paroxysms, and may be very violent. As the result of such efforts at coughing and in addition the powerful expiration, the object may be forced up into the glottic chink and cause sudden marked dyspnoea and even asphyxia. Unless early relieved, a movable foreign body may produce edema and trauma of the tracheal mucosa with consequent additional obstruction and probable infection.

The symptomatology of foreign body within the bronchi has been indicated in my earlier remarks. It is important to remember that when a foreign body has reached a bronchus there may be a cessation of symptoms for weeks and even months, depending upon the nature of the invader, the age and resistance of the patient. Pain may be present or absent. The train of symptoms, although not always constant, is that of cough, cyanosis, fever, sweats, expectoration of large quantities of very foul smelling pus, hemoptysis, and loss of flesh and strength. Physical signs depend to a great extent upon the length of time of sojourn, and the mechanical element. We see contraction of the side of the chest involved and expansion of the other—limitation of respiratory movements, clubbed fingers and clubbed toes—indicating an interference within the lung of the aeration of the blood. Percussion and auscultation elicit sounds varying with the pathology, and has already been considered. As Jackson concretely puts it, "periodic attacks of fever, cough, chills, and sweats, followed by increased coughing and the expulsion of a large amount of purulent, usually more or less foul material, are so nearly diagnostic of foreign body, as to call for exclusion of this probability with the utmost care." And I add to this statement, "especially when frequent examination has failed to demonstrate tubercle bacilli."

To arrive at a diagnosis, the history of the accident, when one can be obtained, must be carefully considered. Frequently there is no knowledge of having inspired a foreign body. When suspected, we should immediately avail ourselves of the fluoroscope, radiogram and bronchoscope. Both frontal and lateral pictures should be taken, as occasionally the shadow of an opaque body will fall within the shadow of the spine and not be seen. In non-opaque bodies, the shadows of the pathological conditions should be carefully studied and compared with the physical signs, and those elicited by auscultation. The bronchoscope should be used for diagnosis, the operator being always prepared for the removal of a suspected object.

For treatment in these cases, there is but one indication—that of removal by bronchoscopy. The risk is slight—not at all to be compared with that of pneumotomy, in which the mortality is close to one hundred per cent. There are practically but few contra-indications—chiefly aneurism, exhaustion and moribund conditions. Jackson in his statistics gives his results in over eight hundred cases as ninety-one per cent successful for removal and cure. Removals have been performed by bronchoscopy under fluoroscopic control. Hickey of Detroit was, I believe, the first to make use of the "giant magnet," applying the same to the chest wall, dragging a closed safety pin from the lower bronchus up through the air passages and delivered by means of a tracheotomy opening.

In this connection it might not be out of place to state that in March, 1921, Lynah and Stewart of New York reported a method of mapping out lung abscesses by means of injections bronchoscopically of sterile mixture of bismuth subcarbonate in olive oil, injecting slowly eight c.c. of the mixture one to two parts, followed immediately by fluoroscopic examination and radiogram. This mixture is harmless, soon passes out and while apparently of no therapeutic value, improvement has been noted in the cases in which it was used. This method opens up a field of study which certainly will be of help to the thoracic surgeon and has great possibilities for the internist and bronchoscopist.

In conclusion, I would like to say that this paper is but an humble effort to direct attention to the more frequent use of these most modern agencies in diagnostinating some of our obscure and long standing pulmonary cases, especially those in whom a specific causative factor cannot be demonstrated. The bronchoscopic treatment of tracheo-bronchial diphtheria should merit your attention and investigation as a means of saving lives.

DISCUSSION

DR. ALFRED HENRY (Indianapolis): As indicated by the subject of the paper, we know that foreign bodies produce many different types of pathology. Lodged bodies may produce pathology anywhere in the lung, in lobules or in the whole lobe, or the right or left bronchus. You can see how we can get gangrene with a foreign body in a small tube. We have a laceration, with inspired circulation and respiration, next we have infection and the respiratory tract nearly always responds to that, so it is easy to see how a foreign body can produce abscesses or gangrene. If a foreign body obstructs a bronchial tube the air that gets in will dilate, this causing bronchiectasis. In fact, one of the first things that is produced is a capillary bronchitis. The foreign body produces a condition that carries with it a good deal of exudate and that is responsible for the rales. Then if we have some foreign body that is sharp and cuts, which subjects the tissue to further insult, trouble is more surely to be brought about.

The gist of the paper seems to be diagnosis, and when we come to diagnosis we have to differentiate and thereby hangs the story of a great many cases. You have bronchiectasis, empyema, a pleurisy with effusion, and gangrene of the lung—you have all these to consider in differentiating. Of course, the first thing is the history, but the essayist says that in some of these cases there is no history. I say we must get down to brass tacks and go clear to the end in this history taking. I take it that everything in the way of disease has some symptoms that aid in making a diagnosis. When we are in the field of pathology we have many indications. In tuberculosis we have red letter signs—we talk about the hemorrhage, but I think we do not have excessive hemorrhage from foreign body cases. We do not necessarily have a feeling of malaise, which is the first symptom of tuberculosis. We do not have tubercle bacilli, we do not have the tuberculin reaction, we do not have complement fixation in the foreign body, but we do have the x-ray, thus we have two or three red letter symptoms in the diagnosis of foreign body. If we will take these red letter symptoms and work them out we can go further along in the diagnosis, and that is the most important point.

DR. C. A. SELLERS (Hartford City): It would seem to me from the standpoint of a general medical man, that the question should hinge on a correct diagnosis, as the previous discussant has stated. I do not believe that the x-ray findings can be absolutely relied upon, except in reliable and experienced hands and then in conjunction with the clinical findings.

There is one point in this paper which I think demands our careful consideration, and, what

I wish to say on this point is not from the standpoint of criticism but from the standpoint of conservation of our patients; that is in advocating the use of the bronchoscope in broncholaryngeal diphtheria. Those of you who have seen broncho-laryngeal diphtheria (which is usually diagnosed as a broncho-pneumonia), especially if this diphtheritic membrane is quite complete, will certainly hesitate to advocate the passing of a bronchoscope. It may be safe in the hands of the very expert to lift out a free membrane that has lodged in the larger bronchus, but when you have evidence of a diffuse broncho-pneumonia one had better depend upon his antitoxin.

DR. JOHN F. BARNHILL (Indianapolis): It has already been pointed out in the discussion which has preceded that there has been an unaccountable inertia on the part of many in the profession concerning foreign bodies in the lung. This is unfortunate, because no class of ailment requires more prompt, more intelligent or more efficient attention than this. It is only by early, intelligent service on the part of the physician that actual tragedy is averted. It has been my misfortune to witness such tragedies. It also has been my supreme joy, with the efficient cooperation of attending physicians, to remove many foreign bodies and to see the patient live on. Often the most serious obstacle to successful removal is a delayed, mistaken or uncertain diagnosis, or failure to make any diagnosis at all. This is usually inexcusable. X-ray service may now be had in the larger cities and towns, and by this means the foreign body may be discovered at once, especially when metallic. The real trouble comes when the foreign body is organic, as a pea, bean or nut. It is in these latter cases that the services of an expert diagnostician are most needed. With the aid of this service and the history of the case as a guide, a correct conclusion may almost certainly be attained.

Within the past two weeks I have seen a case which exemplified the need of greater caution and interest on the part of the physician in the diagnosis of suspected foreign body cases. A child with a peanut in its mouth tried to go through a door, when the door slammed against him, startling him, and causing him to inhale the kernel of the nut into his right bronchus. The mother stated that the child struggled for breath, got blue in the face and nearly died. He then recovered somewhat but was not as before, breathed badly, would not play, and wished to be held in the arms constantly. When the child walked or otherwise exercised he was greatly distressed by cough and impaired respiration.

The above history is pretty typical of what occurs in nearly all cases of inspired foreign body. Keen physicians should suspect the real

cause in all such cases, and should give the most painstaking and thorough examination to ascertain the facts. Many who inhale foreign bodies die in the first paroxysm, and within a few minutes. Should they survive, however, patients often seem more or less normal after a time, except when they exercise. It will be apparent to the observing physician that they are not normal, and a painstaking examination of the lungs will detect the reason.

The doctor first in charge of the case here described expressed the belief that there was nothing serious and that all soon would be right. Another physician was consulted, and while he believed the case not serious was yet cautious enough to advise an x-ray examination. The child was brought to the Methodist Hospital, where plates were made which showed collapse of the right lung.

While we were in the surgery with everything ready to do a bronchoscopy word came from the child's room in the hospital that he had died from sudden suffocation. Evidently he had coughed the peanut from the completely obstructed bronchus and then immediately sucked it into the only open one.

The time certainly has come when foreign body cases should be more frequently and promptly recognized. Both physicians and surgeons are always alive and active in the early diagnosis and operation of appendicitis, gall stone and other abdominal cases. This cannot be said of them in foreign body cases as yet. One of the discussants has intimated that patients suffering from foreign bodies in the air tract have been sent to climatic resorts in the belief that the case was tuberculosis, and that such failure to proper diagnose is a disgrace. Of course it is, and is below the high standard of Indiana medicine. It is because of indifference, not ignorance. But since the result is the same, there should be an awakening to the importance of the subject.

DR. KREBS (closing): I wish to thank the gentlemen for the kind reception of this paper. It is true as Dr. Henry stated in his discussion that a history is not always present. He doubted if it could be obtained. It has been my experience that you can usually obtain a history in a case of voluntary inspiration of a foreign body. In the involuntary variety, there may be no history; especially is this the case in those of unsound mind, and in those patients addicted to the use of drugs. Dressmakers who are in the habit of holding numerous pins in the mouth while fitting are unable to state whether a pin has been lost or not. Pins have been known to go down head first, without any immediate symptoms, thus making the diagnosis more difficult.

In regard to the x-ray, it is not always to be depended upon. A tooth will not always give a picture. Again an opaque body may fall within the shadow of the vertebral column and will not show.

Dr. Barnhill's discussion proved very conclusively and dramatically how easily and rapidly a child may be asphyxiated by a foreign body being coughed out of the bronchus of the already completely closed lung, and immediately inspirated into the other lung.

The question of doing an intubation, a tracheotomy or bronchoscopy in diphtheria, depends to a large extent upon the location of the membrane. If the membrane is situated low down within the larynx, you may not be able to push it aside even with the longest intubation tube. The length of the intubation tube used is limited by the size of the mouth. If the results of the intubation are unsatisfactory, you may resort to a tracheotomy, with its attendant dangers. Yet through a tracheotomy opening you may be able to reach up or down and remove either the entire or part of the obstructing membrane. All of this can be easily accomplished by a laryngoscopy or bronchoscopy, and there is less danger of infection or trauma, and the risk is very much less than that of an intubation or tracheotomy performed by the average man. I still maintain and believe that the method outlined in my paper is perfectly justified and is to be indicated as a regular procedure especially when the membrane is low down.

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GROUP MEDICINE DIAGNOSIS*

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Mr. President, Members of the Fourth Councilor District Indiana Medical Society.
 Ladies and Gentlemen:

The writer recalls his wonder and amazement, when he first attended the Medical, Surgical and other Clinics at the Medical Department of the old University of Louisville, in the early nineties, and watched the professor "make the diagnosis". As he now reminiscences, he remembers the feeling of delight which overcame him when he first began to get a glimpse of the plan, the professor, in those days, pursued, in order to establish his diagnosis. He wondered then at the possibility of exactly knowing what was the matter with the patient and he was amazed at the idea of the professor's accuracy in the summing up of his opinion.

Almost thirty years have elapsed since these observations were made. In this long span of time much in diagnosis has been rewritten, but be it said to the credit of the men of those and earlier days, their work was so well done, the

avenues by which they were to reach their conclusions were so carefully and searchingly explored and the plan so well executed, that we may largely depend, even in these more modern times, upon the same rules and regulations then in vogue, and feel assured that we are not far from the truth of a correct opinion.

When your president, Dr. D. W. Weaver, did me the honor recently to request me to address you this evening, I cast about for a theme which I might, with propriety, present, finally determining upon the general subject of diagnosis. Though there may be many and possibly much more alluring subjects for an audience like this. I felt that it might please us and maybe profit us to spend our time recounting, more or less in detail, the plan by which the modern day doctor approaches the accurate diagnosis of his patient's case.

To be a success at any work or any endeavor, one must understand what is before him. The successful farmer, the successful stock breeder and stock raiser, the successful plumber, the successful butcher, the baker or the candlestick maker, the successful preacher, lawyer, doctor, whatever the calling, vocation or profession, in order to succeed at it, he must know it and devote himself to it. If he does, there is no higher accomplishment than its successful performance, whatever it be. Among the very difficult tasks, which requires the highest order of intelligence and exacts the most untiring devotion to duty, none exceeds the calling of the physician, whose work deals with God's masterpiece—man. The complexity of the human organism and its mechanism, its masterful performance in health and its strange performance when diseased has occupied the best minds and best talents from the beginning of creation. Slowly but surely the veil has been lifted, and, one by one, the inner and more hidden recesses of the human animal have been explored and explained, until the medical man of the day, after examining the patient, as a whole, has been enabled, almost, so to speak, to disassemble the parts, interpret each separate part, and again to re-assemble the patient, even as the mechanic in the automobile industry becomes skillful in the disassembling and re-assembling of the machine.

Present Day Plan of Approach to the Diagnosis:

- (1) History Taking.
- (2) General Physical Examination.
- (3) Special Examinations.
- (4) Laboratory Work, including x-ray.

Each of the above divisions is further considered, divided and sub-divided as follows:

The History Taking. No part of the diagnosis is more important and requires greater skill, tact and patience than is necessary, in order to obtain a correct and dependable history.

*An address delivered before the Fourth Councilor District Indiana Medical Society, at its annual meeting at Seymour, Indiana, May 25, 1921.

Not every physician is capable of obtaining a history. Indeed, I have frequently had patients say to me, "I could not tell that doctor *anything* about myself; he is too curt and too short and entirely too unsympathetic." Or I have had them say, "I wanted to tell the doctor how I felt and what was the matter with me, but he seemed to repel me, or he seemed to think he already knew all about me." To get the salient facts from the patient, as has already been stated, requires skill, tact and patience, neither more nor less of any one of these faculties and attributes, but surely much of all three. In our work, I have cautioned my associates to strain every energy and to bend every effort to discharge their fullest duty in "*the hearing of the patient's story*". We look upon the history taking as one of the most, if not the most, important single procedure in our effort to establish our diagnosis. Individual patients require individual handling in this as in other regards. Not every patient's history is to be obtained alike, but rather each patient's history is gotten after his or her particular fashion and liking. Some patients are loquacious, others are reticent, some are truthful, others are treacherous and deceitful, some are intelligent, others are stupid, some are easy and some are difficult. We never attempt to take a history hurriedly, but always aim to give all of the time necessary for its proper taking. We never feel that we have done justice to the history taking when we have devoted but one period of time to it, but rather prefer to go over the items, again and again, with the patient (or those accompanying the patient), and we like to do this on other days than the day the history was first taken. When the history taking is complete, we ask ourselves this question in the clinic, "In what direction does the history lead?" By this we mean, does it lead us to assume that the chief deviation from the normal involves (1) the Digestive System, (2) the Respiratory System, (3) the Nervous System, (4) the Skin, (5) the Genito-Urinary System, (6) the Osseous System, (7) the Joint System, (8) the Muscular System, (9) the Glandular System, etc., etc. Whatever may be the special direction or directions into which the patient's relating of his history leads us, we then undertake to develop this particular direction or the particular directions, by a special inquiry, studiously devoted thereto, a so-called "Special History Taking". In Group Medicine, as we conduct its practice in the clinic, we have found it well for several different members of the staff to take a hand in the developing of the history of each patient. We thus get important data previously overlooked.

History Sub-Divisions. Among these subdivisions may be briefly mentioned (a) Present History, which represents what the patient has

in mind to tell the physician of his present condition. The present history is what actually brings the patient to consult the physician. Often this is all important, as for example, when it includes sudden departures from the normal, viz., chill, fever, sweat, general discomfort, with lancinating pain at the base of the right lung, cough and blood stained or brick dust expectoration. These are classical manifestations of a pneumonia and may be all the history that is available or need be obtained. In the vast majority of instances, however, we desire a carefully taken history of the preceding state of health, that is the health immediately preceding the beginning of the complaint. When the *status praesens* has been fully developed, (b) the Past History is inquired into. This includes all of the past, namely, from birth to the beginning of the present illness. We should know what diseases have been suffered, when they were suffered, how severe each disease was, what complications were present, and what sequelæ, if any, followed. We are interested in knowing *when* and *how often*, and *for what reason*, the patient was last in bed. The diseases of adult life, previously suffered, including the (c) Diseases of Infancy and Childhood, any and all may have a very positive bearing on the present ailment. In any event, the earmarks thereof may be looked for in the final estimate, which we will make of the patient.

Only the doctor who has taken pains to elicit every part and parcel of the history, past as well as present, including sometimes the seemingly most remote and insignificant facts, will succeed in adding that finer touch to history taking, of which Modern Day Diagnosis boasts. The patient whose train of symptoms leads us very positively in a certain direction will oftentimes fail to tell the physician certain facts which have a most important bearing on his case. We must remember that the untrained mind of the patient in nowise fits him to make plain the salient points to the doctor. We must also remember that there are certain facts in the life history of patients which may have entirely escaped the recollection, but which will be recalled and sometimes vividly described, if we but carefully lead the patient back into the past.

I have in mind the history of a most intelligent patient, a man of culture and refinement, the trusted employee, throughout a period of fifty years, of a railroad and bridge company. When the gentleman first consulted us and a diagnosis of tertiary syphilis was made, he was wholly unable to accept it. There was no question in our minds as to the findings, though the history of the patient was deficient as to the date of any infection. He was a married man, past 65 years of age; his wife, living, and, though her health was not good and had not

been good for years, she presented no present evidence of a luetic infection; she recited no history that was even suggestive; she had been pregnant one time only, had had no miscarriages, had given birth to a healthy child, who in turn was the mother of a lovely, healthy, young daughter, some twelve or thirteen years of age. The patient himself had seemingly been in perfect health throughout all of his married life. Indeed, he could recall no illness of any sort whatsoever. Bilateral, palpable, discrete glands, absent knee jerk, Argyll-Robertson pupil, choke disk, unsteady gait, "gastric crises", positive Babinsky, together with a "four plus" Wassermann, made the Diagnostic Summary complete. Weeks after the man was under treatment, his chief symptom being high blood pressure, with headache and vertigo, he recalled and gave me a very accurate account of his having suffered "some sort of a venereal lesion", now clearly remembered. He was, at the time, working with a railroad bridge crew in Tennessee. Pay-day came around. Together with other members of the crew, all older than himself, he journeyed to Nashville for the week-end, and there, having illicit intercourse, suffered an infection which quite incapacitated him for some time. The facts were recited, just as I now re-enumerate them for you. It was necessary for him to temporarily give up his position. An older brother was sent for, who took him back to his home in Pennsylvania, where he had a "thorough course" of treatment with "mercury and potash". Could a faulty history be made more positive than by a recital of such facts, and yet the memory tablet was at first entirely lacking?

Then, there are the patients who, in order to tell the doctor all that he desires to know and should know, would require the unbosoming of the most sacred recesses of their souls. How often do we meet with these patients and how difficult is it to get the facts! It would be easy for any physician to recall innumerable instances, illustrative of cases of this sort. One or two more should not be amiss, ere we leave the important department of History Taking.

A young miss, age 16, was brought to us from the mountains of Eastern Kentucky. A beautiful brunette lassie. She was suffering from a very acute nephritis, which had suddenly arisen some four weeks previously. I do not recall having seen a more pronounced clinical picture: Edema, amounting to general anasarca, pyrexia, furred tongue, nausea, with persistent vomiting, anorexia, complete. Examination revealed: Rapid heart with some hypertrophy of the left ventricle, albumin, four plus, with hyaline, finely and coarsely granular casts, and with a low urea output. She presented a retinitis albuminurica. The nervous system showed such evidence of

intoxication as to make us fear uremic convulsions. The past history revealed nothing that would justify the faintest reason for the condition. She had visited, beginning some six months previous, in the South and was supposed to have become infected with the malarial parasite. A letter to us from her physician was to the effect that she had been treated by him for such a condition and that the kidney state was secondary to the plasmodium. The blood failed to disclose the Laveran organism. Ours, however, was the first blood examination which had been made. The patient had simply been treated symptomatically for malaria, because she had recently resided in the malarial zone. What was really the matter with this child? Simple enough, though tragic. She was pregnant. She knew what was her trouble, but was unable to disclose it. I shall never forget the tragedy connected with the case—the presenting by me of the true facts to a heart-broken mother, then the later accouchement of the young mother and the finding of a home for the baby. So, I recall other instances in which, when the patient had disclosed the secret of his soul and unbosomed himself to his doctor, the diagnosis was immediate and the treatment quickly effectual.

Genito-Urinary History. Too much emphasis cannot possibly be laid upon the obtaining of an accurate genito-urinary history. We must not lose sight of the fact that venereal infections often occur at a time in life when little attention is paid by individual to self. Furthermore, we must not lose sight of the fact that men have been taught to believe that venereal lesions are of little consequence, therefore they forget such infections. It has been said that the civilized world is rapidly becoming syphilized. Let us therefore inquire searchingly of the sexual life of our patients.

Family History. More and more, we come to discover the importance of giving consideration to the family history: Age of father and mother, their previous health, if living; otherwise the cause of death of parents as well as the state of their health during life. The number of brothers and sisters living, their state of health. The number dead, the cause of death of each, with an accurate account of their previous health. We do not go amiss when we make even further inquiry into the health of the grandparents on either side, as well as the health of uncles and aunts.

Heredity. Under this caption, we have in mind chiefly nervous and mental diseases, though we also give consideration to malignancy, tuberculosis and nephritis.

Place of Abode. In the taking of the patient's history, it is interesting to know not only where the patient lives at the present time, giving due consideration to certain localities, as being more

salubrious and affording more healthful surroundings than others, but it is also proper and very important to learn *where* the patient has previously resided and for how long a period of time. In these days, when a successful warfare has been waged against the malaria bearing mosquito and against the typhoid germ, we at once realize the importance of knowing whether the individual who seeks our aid has been in the swamps of Mississippi or Alabama or has lately been in the outlying country district, where he, perchance, partook of typhoid infected water. Not infrequently does the latter infection come about, now that the motor car has become ubiquitous. Following Sunday afternoon drives into the adjoining country, and week-ends spent with the family at some resort, not infrequently the germ of Eberth finds lodgement and grows.

Marital History. In the clinic, we have frequently found it of primary importance to get a complete marital history. This should include not only the present marriage, but previous marriages, if any. Now that the divorce courts make it so easy to obtain release from connubial dissatisfaction, it is not infrequent that the patient has had previous "encounters". We want to know the health of the mate, the number and health of the children, miscarriages, if any, and how many. Recently, a male patient had difficulty in understanding why we were so persistent in knowing about his wife. We even like to know and strive to discover the family relations, as to whether they are pleasant or unpleasant. Many a man is sick and suffers from the intoxication of overwork and worry whose wife and daughters spend more than he can make. Many a man is ill on account of business reverses, which may be wholly beyond his control and fault, or which may be the result of his inattention. Many a woman is sick because of a faithless husband, and many a mother is sick because of a wayward son or daughter.

The occasion will not permit of the devoting of more time to the consideration of history taking. May I say that it has been my experience, throughout more than twenty-five years of activity in medicine, where diagnosis was uppermost in my mind, that the carefully taken history more frequently makes the diagnosis than does the carefully made physical examination. In the practice of Group Medicine, which has occupied us now more than four years, we can corroborate the observation of other groups, that the history is of paramount importance.

General Physical. By the general physical examination is understood, first, a careful inspection of the patient. This includes his height, weight, posture, gait, type, general appearance, nourishment, his mentality. We examine the skin, the hair, the nails, the glandular system,

the muscular system, the osseous system, the joints and the nervous system. The examiner notes in detail any deviation from the normal which he finds, to be further studied by the special examiner. For the General Physical, the patient is stripped to the skin and examined in the sitting, standing and recumbent postures. The examiner accurately describes abnormalities and deformities, wherever they are found. The patient is carefully questioned as to all accidents and injuries which may have been suffered during his lifetime, including shocks, if any, to his nervous system. Previous operations are described, when and by whom done. As a rule, few patients know much regarding the surgical procedures they have endured. And strange as it may seem, they usually know less about major surgical operations than about minor pieces of work.

Special Physical Examinations. We divide the Special Physical into (1) a carefully made physical of the head and neck; (2) a carefully made physical of the (a) upper extremities and (b) the lower extremities; (3) a carefully made physical of the thorax; (4) a carefully made physical of the abdomen; (5) a carefully made physical of the pelvis and (6) of the rectum.

Physical of the Thorax. This includes the heart, the lungs, the mediastinum. In the making of the physical of the thorax, we include a careful survey of the entire vascular system. The thyroid gland is examined, noting any variation in size and whether the function of the gland is normal.

Physical of the Abdomen. The examination of the abdomen is done by several members of the staff. It is first done by the medical side of the staff. Thereafter, the digestive tube is emptied by a laxative or by enema or both, and the examination repeated by other members of the staff, including the surgical side of the house. Because the surgeon more frequently sees the interior of the abdomen (unless the internist has similarly had a large experience, ante and post mortem), more weight is usually attached to his findings. In our opinion, there is no basis for such a view. In the making of the abdominal examination is included a report of the condition of the rectum, the anus and of the sphincter. A report is also made of the kidneys, stating whether both organs are palpable.

Genito-Urinary Examination. The Department of Urology and Genito-Urinary Diseases makes this examination. It includes a survey of the external genitals, an examination of the urethra, together with the use of the cystoscope. In the male, the prostate gland and seminal vesicles are interrogated. Smears are obtained and cultures made, where required. In the female,

the Genito-Urinary Department makes its investigation after the Department of Gynecology has first made its examination.

Pelvic Examination. This examination includes the vagina, meatus, perineum, the uterus and adnexa.

SPECIAL EXAMINATIONS—Dentistry. The Dental Department makes a report of the condition of the mouth and teeth. Such teeth are subjected to x-ray as the Department of Dentistry designates. The Dental X-Ray Department is separate and apart from the General X-Ray Department, being under the supervision of the dental member of the staff. This department not infrequently *clears up* a difficult diagnosis and occasionally makes the diagnosis *in toto*.

Eye, Ear, Nose and Throat. The Department of Eye, Ear, Nose and Throat makes a scrutinizing examination of each patient, very frequently throwing such light on the case as to make the final interpretation and the general "sum up" much easier.

Orthopedics. Each patient is subjected to an examination by the Department of Orthopedics. Recently, we were wonderfully repaid by the findings reported by our Dr. Pirtle. A gentleman, age 41, had been suffering, at times, indifferent pains with more or less general discomfort all the time. He had been given sundry and diverse prescriptions, without benefit. The Orthopedic Department discovered a shortening in one leg, amounting to three-fourths of an inch, which resulted from an injury to the spine and pelvis, suffered in a railroad accident, fifteen years before. The patient had previously omitted telling us anything about this serious injury, which was the whole cause of his present ailment. X-ray disclosed the exact damage, long since crudely repaired by Nature. Adding three-fourths of an inch to the inner sole and outer sole of the patient's shoe, all of his pain and discomfort disappeared.

The Laboratories. Every patient who passes through our clinic receives a certain amount of Routine Laboratory Work—

(1) Urine:—This includes not less than three examinations of the urine, often four or more, both chemically and microscopically. At least one twenty-four hour specimen is included. A Kidney Function Test is regularly done on all patients whose urine shows marked deviations from the normal.

(2) Blood:—A blood examination is done on every patient. This includes hemoglobin estimation, red blood count, white blood count, differential count, together with a search for pathological cells and parasites.

(3) Wassermann:—A routine Wassermann is done on every patient. This is a Blood Wassermann.

(4) Spinal Wassermanns are not frequently done.

(5) Basal Metabolism is undertaken, whenever indicated.

(6) Blood Chemistry similarly is carried out, when indicated.

(7) Sputum examinations,

(8) Gastric analyses, and

(9) Feces examinations are frequently done.

(10) Goetsch and other tests are done, whenever indicated.

Roentgen Rays:—X-ray is routinely done on every patient. This includes fluoroscopy and plates of the chest, usually stereoscopic plates. A gastro-intestinal examination with the x-ray is also done, using the fluoroscope from mouth, through to anus. Plates are exposed, where indicated. Where the history or the physical examination makes the suggestion, x-ray examination is made of (1) the head, in particular of the sinuses, (2) the gall bladder region, (3) the urinary tract.

A very natural question arises in the minds of gentlemen who are not familiar with Group Medicine and Group Diagnosis. I shall anticipate this question today. Men wonder not as to the need of such scrutinizing survey of patients, but they wonder as to the Method of Management of Group Practice. It may not be amiss for me to say that the making of such an examination contemplates a large staff of men and women, and certainly a large equipment. If the group is to succeed it must be composed of individuals of large practical experience, its members having been well grounded in the science and art of medicine. Of absolute necessity and of primary importance to success is a Chief of Staff, who directs the enterprise and who carries the major responsibility. It has been said that "Every successful Institution is the Lengthened Shadow of a Single Man". Nowhere is this more certainly true than in Group Medicine.

Group Diagnosis affords its devotees a satisfaction that can only be understood by those who have access to it. A group should be located in close proximity to every city of any size. The members of the group will benefit largely by their association. The profession, whom they assist, and the public, whom the Group serves, will benefit even more. Modern day diagnosis is the more accurate in proportion as the Group undertaking the diagnosis is composed of men specially trained for the more especial work.

THE PHYSICIAN

DUTY TOWARD THE PSYCHOLOGICAL DEVELOPMENT OF CHILDHOOD AND YOUTH IN
THE HOME*

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Of the various organic systems of the body, Nature points out that which is most important. The bony skull and spinal column indicate the precious nature of the contained structures—the brain and spinal cord. With other organic systems medicine has made tremendous strides toward conserving integrity. In the case of the gastro-intestinal tract elaborate sanitary measures have been established to protect against contaminated water or food-stuffs. Carefully wrought-out instructions have been devised concerning the danger of lung injury by the inhalation of infectious, physical or chemical substances. Much has been written about the tonsils and teeth as portals of entry of pathogenic organisms to the body. But what has been done to guard the central nervous system from mal-development or to foster normal development of this, the presiding and supervising genius of all our functions?

Man as a sentient and thinking being is such because of his central nervous system. Its proper functioning underlies efficiency, attainment, contentment. Who will contend that the growth and powers of the central nervous system are not influenced by heredity, environment or training; or deny that its capacities may be retarded by accidents, obstacles and rebuffs? Conversely all acknowledge that its growth and stability are favored by good mental hygiene, methods which bring encouragement, achievement and establish the habit of nervous stability. During the moulding period of childhood and youth, good training will make, just as bad supervision and direction will mar, the capacities for mental and moral achievement. How great therefore the responsibility of those charged with the rearing and education of children.

To those on whom this privilege and task falls, it should be the duty of the physician to make plain the nature and seriousness of habit formation. First let it be made clear that acts often repeated become second nature, the nerve-center reactions and impulses causing structural changes, which persist just as do scars from injury.

Many of the body acts are at first instinctive but later become from repetition habitual; as the taking of food. Other acts require at first the exercise of reason but later are performed automatically without the use of the higher

intellectual faculties. A pianist, for example, reads a difficult composition. In the learning this is an intellectual process. The piece is played over and over again until memorized. Now the composition is rendered without detailed mental effort, the fingers performing the intricate movements more perfectly than was at first possible under mental concentration. The procedure is a complex finger movement which the sub-conscious and reflex centers execute with amazing celerity and skill. In like manner writing, walking and talking are at first mainly intellectual procedures but with endless repetition, the subordinate centers take over the performance. The same principle of sub-conscious and automatic control underlies all manual pursuits. Habit formation, then, is at the bottom of both the artistic and useful accomplishments in life. All have a physical basis in the central nervous system and when once well learned one may properly say that a record has been made and preserved in the sub-conscious realm of the nervous system. Once in a while when desired the intellect, through the memory, pulls out a record but the sub-conscious and automatic centers must be depended upon to reproduce the details, e. g., piano playing, skating.

Just as good habits are acquired by proper training, so do bad ones arise from improper methods. When Shakespeare wrote, "How use doth breed a habit in a man," he had in mind the unfortunate results of bad moral training. Acts at first consciously wrong, repeated over and over, lose the pangs of guilt, coming gradually under the control of the half-conscious centers which in time dominate even the intellect and the will. The individual becomes the dupe and slave of his brute impulses. For example, violation again and again of the seventh commandment leads ultimately to supremacy of the sexual instincts over the intellectual and moral centers, resulting in a prostitute—male or female. Habit channels are worn deep, producing structural alterations not likely to be righted, or at best most difficult to change. Is the prostitute or the confirmed drunkard easily reformed? No, because permanent structural damage has been done to nervous tissues. Does not the same physiological law hold good with regard to other immoral habits as well as mental and temperamental faults of adult life? One of advanced maturity only needs to consult his own observations and acquaintanceship with people to support the contention made. Have you not known children of violent and uncontrolled tempers who became naturally, almost inevitably, irascible and unreasonable men? Have you often observed indolence and slothfulness in a boy followed by industry and orderliness in the man? Cynicism, pessimism,

*Twentieth of a series of articles by Dr. Wynn which are appearing regularly in THE JOURNAL.

selfishness, whining, faultfinding, lying, carelessness, slovenliness, when found in the adult are dominant characteristics which might, by proper training during the moulding period, have been prevented or greatly modified. Uncorrected in childhood and youth they become habitual handicaps. As with Cain of old, they stamp the individual with the mark of inefficiency throughout life. Whilst the test-tube and microscope may not have demonstrated the existence of tissue changes in these cases, as observant physicians are we not convinced that acts long repeated during the moulding period of life, eventuate in physical changes in the nervous system as real and difficult to efface as a scar upon the arm?

The more general acceptance of the seriousness of these truths should impress upon the world the extreme importance of correct training during the growing period of life. The music master does not hope to develop a great violinist without patient and painstaking instruction of the pupil in childhood. The building of good character or stable temperament, by wise and tactful control in childhood, is just as important as the making of a good musician.

The prevention of bad habits and the cultivation by proper training of good ones is the greatest mission of parents. Correct habit-building should be the chief purpose of education. That the present age falls short of duty and opportunity is often apparent in the home where the responsibilities of motherhood are put aside for the glare and whirl of social life; or in the case of the father, in whom the place of parental comradeship with sons is usurped by commercial or professional ambition. And in schools and colleges the disposition is to cram the brain with mere knowledge rather than to build well the foundation for character and self-mastery. Many parents unfortunately entertain the false view that childhood is a complexus of carnal impulses which in the course of time will burn out and leave the organism unharmed. As well might the farmer say, "Let the weeds grow, the corn will take care of itself." Without discipline, tactful but firm, there can be no schooling in self-control, and a bad foundation is laid for habit handicap later in life. The parent who draws back from the correction of a child, kindly but firmly, is not generous but selfish. Too often the world indulges in a sort of maudlin glorification of the mother who indulges her children excessively, excusing it on the ground of her supposed love for them. The fact is, she is coddling her own selfishness; sparing her own feelings of present discomfort. The higher and truer form of love for her offspring would look to the future of the child, and be willing to make sacrifice of feeling now

for the later good which would bless the life. Any other course is short-sighted—often it means the sowing of seed which will reap a whirlwind of misfortunes in later life.

The writer accounts himself unusually fortunate in having had parents unafraid of duty in these respects. My father, extremely devoted to his children, had a far-seeing mind and an acute conscience which took in our lives as totalities—the present and future potentialities for good and evil. In every parental emergency, the query submitted to his conscience was, "What is best not merely now but for the full rounding out of my child's life?" With quick decision he saw and executed, kindly but unwaveringly. A personal illustration does not make the example less instructive.

The writer, like all healthy country lads, had a voracious appetite for the good things of the table, often to my later distress. With sound reasoning father placed a ban on these excesses. When occasion arose for the possibility of appetite abuse, the law was applied, whereupon I protested in fury and created a "scene". Without more words than that one helping was enough, he called for the "cold towel". This was wrung out of ice-water, then applied over my face and neck, causing several deep inspirations and the cooling of my wrath. With every impassioned outburst this was repeated. On his part there was no anger—no quibbling or argument. Whether at the table or elsewhere, any of my emotional explosions were treated in the same manner—always with a calming and satisfactory result. A few months of this treatment established my self-control.

Of the definitely recognized, functional, nervous disorders which arise during childhood or adolescence, hysteria is perhaps the most frequent. Whatever the hereditary background or individual predisposition, it is universally recognized that mental and moral factors bring on the storm—the loss of inhibition followed by an overwhelming flood of emotions. These tremendous reactions must of themselves produce marked changes in the nervous centers. A few such explosions and the "hysterical habit" is established for life. A trifling assault only is necessary to knock down the floodgates of inhibition, and away goes the maddening stream, sweeping reason and judgment before it. Knowing these things to be true, should we as practitioners, not more frequently seek to anticipate and prevent the growth of the "hysterical habit"? Let a general practitioner, in whose office the writer was a student, speak in his matchless way upon this subject.

In the practice of Dr. S. was a family of high social position and ample means. The parents were over-indulgent to their two sons and a daughter just budding into womanhood—a

beautiful girl whose every whim was gratified. She lay abed in the morning late, often eating breakfast in her room. No household duties were required, certainly no drudgeries or tasks which called for patience and personal sacrifice. There grew up in her mind the idea that nothing she was called upon to do should be hard or disagreeable. Her mother was always cautioning her against anything that would make her tired—mentally or physically—as though it were a sin to exercise brain or muscle to the point of fatigue. Thus coddled from year to year a superior product of inefficiency resulted. It was easy to predict what would happen later in high school and college. The hard subjects were shied at or side-tracked for easy elective courses which did not require so much effort. Even then examinations often brought failures which maternal sympathy protested against. There were lapsed hours and days, with feeble excuses of headaches, calling for a doctor's certificate, which he always made out with a wry face. Social functions were entered into with zest until things went counter to her pleasure; then ensued a nervous explosion. Was it the failure of her lover to take her to some coveted entertainment, or a quarrel with someone in her "set"—up went her anger in uncontrollable emotion and down her spirits to the depths of prolonged despair. These tantrums were becoming more frequent and the doctor felt called upon to do more than prescribe valarian and bromids. He asked a conference of the parents and daughter in his private consultation room. Seating them he began, whilst I (by his suggestion) eaves-dropped from the little drug room in the rear. "As memory recalls," he began, "it is about twenty-five years since I came into your lives. It has been a fine relationship, more precious to me in the mutual confidence and friendship enjoyed than in the material rewards. John, I have seen you and Mary through some pretty tight places, and now you are in another. It is a most delicate matter that I want to discuss with you, and the expression of my opinions may cost me your friendship, but I shall at least enjoy the consciousness of having done my professional duty. In order to avoid an unseemly quarrel at this time, I am going to ask you to keep still until I have finished. Then let us see if we cannot shake hands and start in with unwavering determination to win this battle. Now while Helen is the subject of our anxiety at this time, I want to say that I honestly think that her parents have been more to blame than she has been. You have allowed her instinctive impulses to have sway until they have become habitual, dominating the finer traits of character. You are making out of her a physical, mental and moral "tenderfoot"—no physical endurance developed, no intellectual

tenacity cultivated, no moral stamina and self-control to balance, co-ordinate and carry through the problems of life. For this neglect she is reaping the penalty in these nervous explosions. It is developing into a plain case of chronic hysteria. But don't flatter yourselves that hysteria is any simple malady which can be readily cured or thrown off at will. The thought of smallpox or typhoid fever strikes terror to your souls, but as a physician I say to you that chronic hysteria is infinitely worse. Helen, these paroxysms if not checked in due season, will continue throughout life, interfering with domestic responsibilities, child-bearing and child-rearing. Your hygienic, physiologic and psychologic training along right lines just now is vastly more important than a college diploma, any social prestige you may acquire, or any dowry your parents may bestow. Furthermore, is it quite fair to the splendid young man who is a suitor for your hand, that he should not know the exact nature of the attacks you are having?

"Helen, it is worth remembering that I helped celebrate your first birthday, and gave you your first spanking. And now I am giving you a mental flogging that will do you more good than the first one. The truth is, I think you so fine that I want to see how good a job I can make out of you. You have been a sort of frisky colt, frolicking around in rich pastures, kicking up your heels and doing just as you pleased. Now you have reached the age where you must get into harness and pull loads—that is the order of life if we live up to duty. The folks have not held the lines very tight. Consequently you went your own gait, balking now and then or kicking off the harness (always a serious thing in the breaking of a colt) and now they are turning the lines over to me. So it is for me to teach you how to pull the load.

"These are most serious problems for you, my dear child, which, as a real friend and a good doctor I want to help you solve in the right way. The first medicine I prescribe is to be taken before breakfast—an hour's walk, rain or shine, summer or winter. No leniency is to be shown in this matter without my consent. Secondly, the minute you find from any cause those terrible impulses seizing you to kick off the harness, make a bee-line for my office. I'll mount 'Old Bill' and you can ride Fanny—the finest saddle horse in Indiana. We'll gallop away to the country. While I minister words of encouragement and remedies to alleviate the suffering of poor old Mrs. Armstrong, dying of cancer, you can sit on the creek-bank under the trees, and profit by their wise counsel. Their leaves will whisper to you 'Patience! Patience!' They will tell you about the tedious hundred years they have been steadfastly at the job the Creator gave them to do. They will pour out the soothing balm of meditation on your fretted

nerves. Their quiet dignity and tender ministrations will build anew your hope and renew your courage to fight a good fight. O! Yes, Helen, you are going to win this battle! You have from fine parents the mettle in you to do it. All that's necessary is to get it to working properly. Your General commands. Attention! Forward march!" Then with pretended military pomp he strode over to her chair, took her shapely hand between his big ones and let out one of his rollicking laughs. He had won. No debate of the question was necessary. "Yes, doctor," said Helen, "I'll follow where you lead." And she did. Mutually faithful, doctor and patient labored years in the rebuilding of her temperamental impulses. She developed along wholesome physiologic lines into a wonderful woman. Who can measure the material price of the service this prince of physicians rendered? Compare his psychic and spiritual artistry with the mechanical technique of the operating room. Which shines with the greater luster?

Parents need instruction in the physiology and psychology of child-control and direction. They should be taught the methods most likely to attain results. Instead of parental neglect in training as illustrated by the latter example, one sees just as often the precise opposite, a nagging discipline, which is worse than no training. What is here said of parents is equally true of teachers, superintendents, the heads of great commercial and industrial concerns, managers, foremen and the like. From childhood to old age there are arising constantly these psychological and ethical problems which have more to do than aught else with efficiency and contentment in life. Is education doing all that it should in this direction? And finally may it not be contended with reason that our profession should be the leaders to show the physiologic highways along which to travel?

THE DANGERS AND DUTIES OF THE HOUR*

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The title of my address is taken from one by Dr. William Goodell, a graduate of Jefferson College, but who was for many years a professor in the University of Pennsylvania. It was entitled the "Dangers and Duties of the Hour." These today are so varied that it is impossible for me, in the few minutes that I can detain you, to take all of them into consideration; but I shall speak of a few of them.

*Address delivered at the banquet of the Medical Society of New Jersey's Annual Meeting at Atlantic City, June 15, 1921. Reprinted from Journal of the Medical Society of New Jersey, December, 1921.

As we all know, there is a curious condition of unrest and lack of solidarity in the world at present. There is an existent idea that all men should get something but give nothing for it. Some men have the belief that they were born into this world to reform everybody else with the idea of standardizing everything we touch and do. Our food is standardized; our drugs are standardized; our forms of medical practice are standardized. They say we shall do this or that. They standardize our hospitals, whether in a town of five thousand, or in a city of two million inhabitants. They are saying to free-born American citizens, "If you are going to be in Class A, you must do what we say, and if you do not do what we say we will publish your name as belonging to Class B." Often you find that the instigators of these measures belong to one of two classes: they are either men who have not made a success of practice and are running off on some side line which they are free to follow, or because of some fault in their mental structure, so to speak, they go about devoting themselves to the task of trying to direct their successful brethren. They have wild ideas, and decide that the rest of the medical profession must be guided by what they say.

Long-haired men and short-haired women go to Washington and lobby. They buttonhole Senators and Representatives, and make them believe that there is a real demand for what they ask; and the Senators and Representatives pass a law to get rid of them. As a celebrated politician said, when I protested against a certain law being put through, "You do not know much about these things." I said, "I do not; but what I do know, I hate like the devil." He said, "This bill is going through, and will be signed, but the amount of money that will be appropriated to enforce it will be so small that it will not amount to anything. That will get rid of the long-haired men and short-haired women; if we do not think the bill is a good one, we do not make a large enough appropriation to enforce it," but a real danger exists, for these people are now attempting to tell us how to live while we are trying to make our living.

We find members of our profession, with great enthusiasm, many of them conscientiously believing in the correctness of their views, advocating propositions by which medical men will become mere hacks by reason of laws supposed to help the people. If we do not look out we will fall into the position of the panel doctor of Great Britain. I heard the story of a poor panel doctor in London who is paid less than one of their bus drivers. In writing a prescription for one of his poor patients, he ordered twelve capsules, but the patient took only

eight. What do you think happened? A couple of politicians that controlled that particular district called the poor fellow up before them, criticised him, tried him and finally fined him because he had put the city to the expense of putting up four capsules more than the patient needed. The men who did this were commonly known as "Bath House John" and "Hinkey Dink."

When the medical profession permits itself to resort to health centers and poor law clinics, it is being eunched out of its own. It is deceived by a star, which is going out as soon as its members try to grasp it. Group practice, which is a much more ethical procedure, is dangerous. Some of those who know the results of group practice describe it in this way: A man forms a "group" which begins to touch the borderline of non-ethics, because they are going to work as a bunch and get all the business or trade that they can, each for the other. After this has been going on for a while, the man who formed the group, and considers himself the head of it, finds that a large part of the patients are going to one of the other members of the group, because they like him better than himself. Jealousy is aroused in the group and the group falls apart. One man says that he was inadequately paid; another has failed to get his percentage; and the fourth says that the first man hogged the whole thing.

Is there anything in the practice of medicine carried on in that way? No. Practice must depend on what the man is himself. There cannot be a department store arrangement in the practice of medicine, because it is a profession and not a business. In the former you are dealing with the sick who depend on you to be human and humane, but in business the principle is *caveat emptor*, let the buyer beware.

There are other things closely related to the practice of medicine and to the great economic problems, such as the Pure Food and the Drug Act. Under the Harrison Act, they have no right to tax us three dollars a year, so they call it a license. In other words, a legitimate practitioner is taxed because he uses morphine, or other pain removing drug, for a patient who is in agony. Why not fine the life-saving squal each time it brings a man ashore? They do not use the dollars they collect for the uplift of the profession, nor do they use three hundred thousand dollars or more for the benefit of people who failed to get the morphine when they needed it. On the contrary, it is not spent for anything that has any connection with the medical profession or suffering humanity. It is a gouge, and should not be permitted. It is our fault that this is permitted.

Some of us say, "No one is interfering with us;" then suddenly we wake up and find this Harrison Act or the Volstead Act is jammed down our throat. This happens to you and it happens to me. When I wanted to get a license so that I might prescribe some whiskey for a dear old lady of ninety, on whom it acts better than anything else in smoothing the rough path of old age, I was handed a blank to fill out and told I must state whether I was an allopath or a homeopath, I said, "I am neither." The clerk said, "You must be one or the other." I said, "I am a regular practitioner of medicine. I will do anything for anybody that I think will do any good. Why should I be called an allopath?" He said, "If you are a homeopath, you get a permit for sixteen gallons; but if you are an allopath, you get a permit for only three." It looks as if the homeopaths had been able to convince the authorities at Washington that like cures like, but the prohibition officer said that they use the alcohol to make their tinctures.

Where are we, that because a man chooses to call himself a homeopath, he can get sixteen gallons, and because he calls himself a regular practitioner, he is limited to three gallons? Is this a free country, under these circumstances? I think not. This is because we neglect the dangers and duties of the hour.

There is a large Chiropractic College in Iowa which graduates more chiropractors in a year than all the medical schools in the United States graduate regular physicians in a year. The other day a man, a supervisor, said that he had a boy that he thought would like to study medicine. He did not know anything about medicine. That is the trouble with the laity. They do not know anything about medicines. If you give them an ointment and it cures them, they think you are a great doctor but if you talk to them of a polymorphonuclear count, they do not know what you mean. This man made this cold-blooded proposition: He said, "I am a man with a large family, and cannot afford to spend much money for the education of my boy. I have been looking into the matter and find that if he studies medicine, it will be five or six years before he earns a dollar; but if he goes to a chiropractic place, he will make money in a year or eighteen months." It was true. There was no use in arguing with him, or saying, "You ignorant fool; your boy is probably of the same character as you, and ought to be a chiropractor."

I recently visited a town not far from here, where there was a grocery store on one corner, and a store of another kind catacornered from it. These stores were the homes of two boys who had wanted to study medicine. One boy

spent four years studying before he graduated. The other became an osteopath, and was practicing for four years before the other boy came back with his sheepskin and from his hospital service. From the standpoint of fathers, the one who became an osteopath and an early money-maker did the wisest thing. You cannot correct this view by defamation or making fun of it. You can correct it only by an educational campaign.

Now, as to the best means of opposing this danger to the people rather than to ourselves: It is not by going to the Legislature and fighting it on the ground that it is some form of irregular practice. The best method is to educate the laity, so that they will recognize that these various peculiar cults and schools never do anything except for one purpose, as has been illustrated on this stage tonight. The laity do not know that almost every man in the medical profession of the United States does fifty percent of his work for nothing, as I happen to know from the investigations that I have made. The way to combat quackery is not as two camps engaged in commercial pursuits would try to correct it, but by a process of education.

Not long ago I had an amusing experience, when a patient of mine went to the altar of a foreign god. She told me that she had been under the care of a certain osteopath, and said, "I hope you do not mind." I said, "No; the more he practices, the more I get." "Isn't that funny," she remarked, "that is just what he said about you!" I mention this joke on me because it illustrates the fact that you cannot do anything in the way of opposition except by education. A bank president in Philadelphia was told by a quack that he could cure him of cataract by reducing a dislocated spine. He does not know medicine, although he knows law. He should have enough education to know that he could not be cured of cataract without a surgical procedure. He must be educated, so that he will not be fooled.

I have been rather diffuse in my remarks tonight: but I told you when I began that the topic was a large one to cover. After all, what does this topic mean? It means that the dangers and duties of the hour require that the New Jersey State Medical Society, and every other State Medical Society, should do as this Society has done: Charge as a phalanx, and fight not only against the outsiders, but also against the small group inside.

In my opinion, the present organization of the American Medical Association has certain serious objections. In the old days, when there

was a meeting, all of the men coming from a certain State got together and acted as a group representing that State, to put through such legislation for that State or the country as seemed wise. When the association got larger, it was decided that there must be a House of Delegates, and a comparatively few rule this, when you consider the number of men represented. The State of Pennsylvania has only six or seven delegates; the State of New York, nine; the State of New Jersey, three. This House of Delegates meets, and what is it made up of? It is made up always, of course, of men who are worthy members of the medical profession; but they are not usually chosen as members of the House of Delegates because they know anything about the business that is going to be transacted. On the contrary, the State Society appoints them as delegates because they are good fellows, because they are going to the meeting any way, or for some other reason. They go to the American Medical Association meeting, and do not know anything about the business to be transacted or the problems to be discussed, and somebody gets up and says that the Council on So-and-So recommends the adoption of the following resolution—perhaps that alcohol is never of value as a drug, and is always harmful (which is ridiculous, because it is untrue and it is no more deleterious than any other drug). "All in favor of this resolution, please say 'Aye'" and Dr. Jones of Rural Lake and Dr. Smith of Tunk Town shout "Aye", and it is telegraphed all over the land that the American Medical Association has passed this resolution, and that thousands of the medical profession assert as a body that alcohol is always a poison, and never of value as a drug. The newspaper does not say that a large minority voted against this resolution, or that a small majority voted for it, but it goes out as a statement of the whole medical profession, although the section made up of pharmacologists who devote their lives to the study of the action of drugs protested against such action being taken.

What then are we to do? We must at one and the same time preserve the rights of the individual and maintain the rights of the profession as a mass. While we are busy with the sick we must remember that there are others who are busy with our affairs and should be watched. There is too much influence exercised by an active small minority and too little by an inert great majority. The latter must be more active in asserting their beliefs and wishes.

**THE JOURNAL
OF THE
INDIANA STATE MEDICAL ASSOCIATION**

Devoted to the Interests of the Medical Profession of Indiana

ALBERT E. BULSON, JR., B.S., M.D., F.A.C.S.

Editor and Manager

Office of Publication, 406 W. Berry St., Ft. Wayne, Ind.

MARCH 15, 1922

EDITORIALS

GROWING OLD GRACEFULLY

It often has been said that few medical men grow old gracefully. So many of them who have been honored by their confreres and been eminently successful in public estimation begin to show peevishness, ill-concealed jealousy, and oftentimes an all-around crabid disposition after they pass middle life but are still young enough and active enough to continue in practice. Probably this is due to what is commonly termed "slipping", and a realization that reputation and skill are not held in the same esteem as formerly by either confreres or public. Some doctors who have enjoyed a large and lucrative practice sour on the world when they discover that the volume of professional work is diminishing and patients are deserting them for younger if not more competent confreres. One may be only "as old as he feels", but there is something about the practice of medicine which makes length of service count in the appreciation of confreres as well as public in the estimation of efficiency, and whether we like it or not, or whether it is just or not, the tendency on the part of many people is to count age and length of service after a certain length of time as increasingly depreciative of efficient professional service. This is more apt to be true in those too frequent instances where the successful practitioner gets independent and perhaps tactless with advancing years and increase of reputation and practice. It really is unfortunate that so many medical men feel that they should be able to do as much and as good work in the twilight of life as they did in their prime, and it is really pathetic to see them evidence their dissatisfaction with progress of age and its attending limitations of efficiency. It is perfectly natural that the younger men should step into the shoes of the older men, and there is every reason in the world why the older men should be willing to have them do so and without any sense of regret, jealousy or antagonism. To grow old gracefully may be a difficult problem for many of us to solve, but it is worthy of serious consideration if we expect to hold the love, respect and appreciation which has been accorded us in the prime of life.

MEDICAL VERSUS LEGAL CHARITY

We have heard recently of an incident which shows the difference between medical and legal men when it comes to the exhibition of charity. A poor woman having little to keep body and soul together suffered an injury for which she received a total compensation of one thousand dollars. The physician who took care of her for the injury was asked by her attorney for a bill and the physician replied that inasmuch as the poor woman had nothing, and whatever she received as compensation would be no more than needed to support her, he would donate his services. To this the lawyer replied that there was no reason why a bill for medical and surgical services should not be rendered inasmuch as his client was receiving one thousand dollars in cash. The lawyer further volunteered the information that inasmuch as the legal bill was four hundred dollars there was no reason why the doctor should not be paid; to which the doctor answered, "Certainly if you are going to take four hundred dollars from this poor woman for the small service that you rendered I haven't the nerve to charge a cent for my services, even though I consider my services much more valuable than yours in this particular case."

Incidents of this character could be multiplied many fold. Some lawyers may be charitable in dealing with their poor clients, but such incidents are few and far between. Furthermore, when it comes to a question of fees, the lawyers have the doctors beaten a mile. A lawyer doesn't hesitate to charge anything from five hundred to twenty-five thousand dollars for writing a will for a man who is only comfortably well off, when the real work of writing the will is turned over to a salaried clerk and no particular skill on the part of the lawyer is exercised. Likewise, in defending a man in a civil suit the fee oftentimes is exorbitant, and yet whoever heard of any complaint on the part of fellow lawyers or for that matter how often does the client offer any objections? For defending a man in a criminal suit, the sky is the limit in estimating legal fees, and no hesitancy or qualms of conscience interfere with the assessment of a legal fee that perhaps takes all or nearly all that the luckless victim possesses. In comparison, if a doctor charges a mere pittance for saving a human life perhaps a howl goes up from the patient and is reiterated by some attorney who never misses an opportunity of gouging his clients. When it comes to legislation, did you ever hear of any legislation that was inimical to the interests of the legal profession? One reason for this is that many lawyers engage in politics and occupy positions in our legislative halls, but another pertinent reason is that, unlike doctors, the lawyers "stick together".

The lesson from this is that doctors should not only "stick together" but should use their voices and influence in making the public appreciate their services in dollars and cents value. Free clinics, dispensaries, and now the new uplift schemes for getting skilled medical and surgical services to the masses at nominal expense, are the factors that depreciate the value of the medical man's services. By all means let us continue our long established custom of bestowing charity when charity is due, but we should frown upon all the socialistic schemes advocated by false reformers who are proposing schemes that both pauperize the community and depreciate the value of medical services.

FIGURES NEVER LIE—BUT FIGURERS DO

Those practitioners of the healing art who maintain that all pathologic conditions, from cancer to chilblains and from soft corns to hardening of the liver, are due to subluxated vertebræ impinging on spinal nerves are republishing their annual batch of "statistics" on the chiropractic treatment of influenza. The standard advertisement runs, in part, as follows:

The Following Statistics of the 1918 "Flu" Epidemic Are Respectfully Submitted:

One of Every 16 Patients Died Under Medical Treatments.

One of Every 127 Patients Died Under Osteopathic Treatments.

One of Every 513 Patients Died Under Christian Science Treatments.

One of Every 886 Patients Died Under Chiropractic Adjustments.

These figures, of course, are evolved from the inner consciousness of those gentlemen that furnish verbal ammunition for chiropractic advertising campaigns. But, even assuming them to be correct, just what do they prove? They prove that many more people die when under the care of a physician than die when under the care of an osteopath, a Christian Science practitioner, or a chiropractor. The medical profession is perfectly willing to admit this; it is equally willing to admit that the vast majority of those who die, die in bed. Neither of these somewhat self-evident propositions, however, argues that scientific medicine is more dangerous than chiropractic, "Christian science", or osteopathy, or that a bed is a dangerous place. They do prove that most people who are sick enough to be in danger of death are usually in bed and under the care of a physician. Any one who is familiar with the facts may admit that comparatively few people die while directly under "chiropractic adjustment" or any other of the fad "treatments". There are two outstanding reasons for this. The first is that the man who relies, for example, on chiropractic for the relief of some passing indisposition precipitately deserts this cult when he realizes that he is dangerously ill. Then he calls in a physician; should he die, he dies under "orthodox

medical treatment". The second reason is that, should a patient die under "chiropractic adjustment", the law would require an inquest, as in very few states in the Union are these gentry permitted to sign death certificates. It is notorious that when the "patient" of a chiropractor becomes dangerously ill, the chiropractor urges the family to call in a physician.—*Journal of the A. M. A.*, March, 1922.

THE ST. LOUIS MEETING OF THE AMERICAN MEDICAL ASSOCIATION

The arrangements of the St. Louis profession for the meeting places for the Session of the A. M. A., which is to be held in their city May 22-26 next, are singularly fortunate and convenient; never has the Association been so well favored in this respect. The district in which the meeting is to take place is at the west edge of the business section of the city, easily accessible from all directions by street car or otherwise and not more than fifteen minutes' street car ride from the most distant hotel. The grouping of the meeting places is so compact that should one walk from the Registration Building (Moolah Temple) to the farthest hall it can be done in ten minutes or less; from section to section is a matter of from one to five minutes. The convenience of the location and arrangements of the different halls is more outstanding than in any other city in which the Association has met, and a decided improvement over the accommodations which were had at the meeting in St. Louis, 1910.

The Registration office, Post Office and Commercial Exhibit are to be in the Moolah Temple (Shrine), a beautiful and commodious building on Lindell Boulevard, two blocks west of Grand Avenue. At the other extremity of the group is the Odean, the home of the St. Louis Symphony Orchestra, with a main hall which seats better than 2,000, and several lesser halls. The main hall will be used for the opening session. Its acoustics are particularly good and suited to our purpose. The Sections on Practice of Medicine and on Diseases of Children meet here. In the assembly hall of the same building the Sections on Pharmacology and Therapeutics, and on Pathology and Physiology, will meet. (It will be noted that there has been an aim to foregather closely allied sections.) The Sheldon Memorial, a very beautiful new hall on Washington Avenue one-half block west of Grand Avenue, which most admirably meets all requirements, will be the meeting place of the Sections on Ophthalmology, and Laryngology, Otology and Rhinology. The Section on Surgery, General and Abdominal, and on Obstetrics, Gynecology and Abdominal Surgery, will be held in the Third Baptist Church on Grand Avenue, a situation well suited to the demands. The Sections on Orthopedics and Nervous and

Mental Diseases will meet in the Law School of the St. Louis University, on Lindell Avenue, a few steps west of Grand. The hall easily seats 500 and is both comfortable and convenient. Dermatology and Syphilis and Urology will use the large Union Methodist Church, on Delmar Avenue just west of Grand, which meets every requirement. The Sections on Gastro-Enterology, Proctology and on Preventive Medicine will use the large hall in the Musicians' Club on Pine Street, east of Grand Avenue, and next to the building of the St. Louis Medical Society, where the House of Delegates will hold its sessions. The Section on Stomatology is assigned to the assembly hall of St. Peter's Parish House, one block west of Grand on Lindell. Immediately in this district will be found three of St. Louis's most important clubs, the St. Louis, University and the Columbian. Restaurants catering to every grade of patronage are numerous in the district and precautions have been taken to insure that normal rates continue during the meeting.

The St. Louis profession is preparing for an unusual attendance; hotel reservations are coming in rapidly, but it is purposed that even the late comer shall be comfortably housed. The wise traveler, however, makes his reservation as early as he finds it possible. Dr. M. B. Clapperton, 3525 Pine St., St. Louis, is Chairman of the Committee on Sections and Section Work.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

ANY physician who desires to present a paper before the Surgical Section of the Indiana State Medical Association at the Muncie session, September 27 to 29, should communicate promptly with Dr. H. W. McDonald, Newcastle, secretary of the Section.

THE little town of Stanford, Monroe county, situated in the center of a wide, unopposed territory, is without a physician, and the citizens

are asking assistance in securing a good doctor for that community. Any doctor interested should address C. R. Young, Stanford, Indiana.

It is not too early to remind those who desire to present papers at the Muncie Session of the Indiana State Medical Association that the program committee is now looking for contributions. Inasmuch as papers are divided among the three sections and the general meeting, contributors are requested to write the secretaries of the sections.

ACCORDING to the February 15 issue of the Western Christian Advocate, Christian Science quarrels are disrupting the erstwhile pacific society. The net earnings of the publishing company have fallen from a profit of \$500,000 a year to a loss of \$20,000 a month. *The Christian Science Monitor* has lost 80 percent of its circulation. Mrs. Eddy is no longer here to compel obedience, and so the autocratic organization breaks up.

IN the roll of honor of the United States representatives who voted against the Sheperd-Towner bill we can place the names of Merrill Moores, of Indianapolis, and Milton Kraus, of Peru. They deserve the thanks of the thinking element in the medical profession. These men, with the exception of William R. Wood, of Lafayette, who did not vote, are the only ones out of thirteen Indiana congressmen who did not vote for the Sheperd-Towner bill.

THE medical profession is honored in the appointment of one of its members to the President's Cabinet. Dr. Hubert Work, President of the American Medical Association, who has been serving as assistant postmaster general during the present administration, and has now been appointed Postmaster General, is the first physician thus honored since Dr. James McHenry served as Secretary of the War in the cabinets of Washington and Adams. Dr. Work is eminently capable of filling the position in which he has been placed.

THE Public Health and Social Welfare Committee of the Massachusetts Legislature has voted unanimously to report adversely on accepting the Sheperd-Towner law. It is expected that other states will take a similar stand, and it is not too early for the medical men of Indiana to think of having this state reject a law that is iniquitous in effect and is not at all in the interests of maternity. If adopted it means increased taxation without corresponding benefits. Its main provision is to give jobs to a lot of office parasites.

WE desire to call attention to the "Ten Commandments of Medical Ethics" formulated by Dr. Frank B. Wynn, of Indianapolis, and published in the February number of THE JOURNAL. Complying with the request of numerous friends, Dr. Wynn has had these ten commandments artistically printed in colors and handsomely illuminated by a specially designed border illustrating the history of medicine in symbols. This reproduction is suitable for framing, size seventeen by twenty-two inches, and the price, postpaid, is two dollars, which may be sent to F. E. Dillon, publisher, 817 Hume-Mansur Building, Indianapolis. These commandments are worthy of a place on the wall of any physician's office. They are a good reminder to the physician of how he should conduct himself, and they also are a good reminder to the lay person as to the aims and objects of medical practice as conducted by the honorable and ethical physician.

"Watch your step!" is an injunction which should be well considered by some of the leaders in our medical profession who intentionally or otherwise are giving their support to various uplift schemes which in the ultimate analysis mean the socializing of the practice of medicine. Free hospitals, free clinics and a dozen or more allied plans for furnishing free medical and surgical service to the public are receiving more or less support from some medical men who later on will live to regret the action, but who at the present time deserve the severest condemnation of their confreres for an action that tends to pernicious results. This whole tendency to socialize the practice of medicine has been insidiously but steadily growing during the last few years, and the pathetic feature of the matter is that much of the movement has been supported and sometimes instigated by medical men probably without thought as to the ultimate vicious results. Already a storm of disapproval is coming up from the rank and file of the medical profession, and those who intentionally or unintentionally would destroy private medical practice as it exists today will be opposed most vigorously.

THE Board of Trustees and the Judicial Council of the A. M. A. have taken notice of the open letter addressed to the County Medical Societies by a so-called "medical advisory committee" by issuing a statement in which they admit that at present there is great need of calm, deliberate consideration of how best to check certain dangerous tendencies affecting the practice of medicine, and to remedy serious conditions that already exist. They condemn the communication as being destructive in character, but admit the need of suggestions as to the best method of combating the evils

that threaten public and professional welfare. As a matter of fact reforms are seldom brought about without calling attention to the need of such reforms. Pointing out evils that exist is not destructive, and pointing out the dangers of innovations that are proposed should not be considered a breach of propriety. In the medical profession we are too prone to let a few do the thinking for us, and those few often-times are too apt to take offense if either their motives or their actions are questioned. Anyway, the subjects which have brought forth discussion are worthy of serious consideration and no doubt much will be accomplished that would not be accomplished were it not for the agitation that has been started by a few men who now are not in particularly good favor in the eyes of some of those who at present rule the destinies of the American Medical Association.

THE newspapers announce that Dr. William J. Mayo, the celebrated surgeon of Rochester, Minnesota, is building a palatial combined yacht and houseboat, with facilities for entertaining numerous friends and with special arrangements for housing and unloading a sufficient number of automobiles to entertain the party when stops are made. Some newspaper writers have remarked that "it pays to practice medicine", but we can assure them that doctors who own private yachts are almost as scarce as hen's teeth. However, why shouldn't the wizards of the medical profession own yachts the same as those who are successful in other vocations? It is a little unfair to jump on medical men continuously because in rare instances they happen to acquire a little property or even put forth an effort to get what is justly due them in compensation. The reason for this is not hard to find, for from time immemorial doctors have been an easy going class, content to relieve suffering humanity with scarcely a thought of reward except that which goes with the knowledge of doing good. The Mayos have been good business men as well as good surgeons. They have exacted toll where toll was due, but, on the other hand, they probably have shown as much if not more of the milk of human kindness as the average doctor. Some of us can never obtain their present position in the financial and medical world but we are not going to criticize or be jealous because they have been more successful. We are only sorry that there are not more men in the profession who have their business as well as surgical ability.

DR. ROYAL S. COPELAND, health commissioner of New York City, has been brought into the limelight through a statement in the "lay" press attributed to him in which he asserts that our "moss covered" code of ethics should be revised, and his reason for the opinion apparently is

founded upon the failure of most of the reputable medical men of New York City to sanction the spectacular work of Professor Lorenz whose reputed philanthropic purposes are open to serious question. At all events the lay press has seized upon the incident as ground for criticism of the medical profession. Some of our Indiana newspapers have taken up the subject, and the *Indianapolis Star* says that "the promotion of the field of the profession as a whole is blocked by the jealousies of the individuals and the cliques wthin it." * * * There is a great deal of suspicion that a considerable part of the adherence to the 'antiquated' ethics is due to the selfishness of certain members of the profession who care little for the general welfare." Fortunately there are some editors of lay publications who appreciate the reasons for a code of ethics which provide reasonable rules of conduct for medical men, and realize that there is nothing in the code which is inimical to scientific and honorable conduct, and the strictest adherence to conscientious service to suffering humanity. There is nothing really wrong with our code of ethics. The trouble lies with those who for selfish purposes or to sanction unworthy motives in others are quite willing to break the code of ethics and condemn its principles. What we need most of all is a rejuvenation of the code of ethics. The code is just as good and just as applicable now as when first formulated.

BENJAMIN F. BLEDSOE of California, judge of the United States District Court, makes some very pertinent statements concerning the doctor and the Eighteenth Amendment in the January 19th number of the *Bulletin of the Los Angeles County Medical Society*. They should be of interest to every physician in Indiana, and we are publishing them herewith:

Doctors as a class are an ennobled lot. Unreservedly they have consecrated themselves to the highest form of service—service in alleviation of human misery and distress. The new life they usher in; the old life they perhaps prolong; to every life they afford comfort and hope. Whether they are the first reliance or the last resort, they come at our request, prepared for any emergency, ready for any responsibility. The slender thread of life is committed毫不hesitatingly into their hands; to them we confidently expect the hidden to become the open book. In our anxiety their knowledge becomes an inspiration, their presence a benediction, their skillful ministrations the sure precursor of relief and rest.

But there are those who would turn these men into an organization of mere bartenders, and at that bartenders operating in defiance of law.

By Constitutional mandate, fortified by appropriate Congressional enactment, the use of intoxicating liquors for beverage purposes is absolutely prohibited throughout the United States. Their use for medicinal purposes, pursuant to appropriate regulations, is preserved. To any doctor who really believes that intoxicating liquors possess substantial therapeutic properties, the way is now open, and probably always will be open, in strict conformity to law, to make use of such instrumentalities.

But there is no law, no code of professional ethics, no necessitous condition of the human system and no possible or plausible excuse offering justification for a self-respecting physician to evade, circumvent and deliberately violate the law of the land by providing liquor for a person as a beverage when in truth he does not need it as a medicine.

The simple question now being propounded to the medical profession of America is this: Will you continue to minister to a man's highest needs and thereby share his gratitude and his respect, or will you prostitute your high privileges and pander to his depraved appetite merely that you may get some of his ill spent money?

THE people of Colorado are to be called upon, at the fall election, to vote upon the prohibition of vivisection. The ballot will contain the following caption: "An Act to Prohibit Injurious, Dangerous or Painful Experimental Operations or Administrations Upon Human Beings or Dumb Animals Except to Relieve or Cure Them; Making Exceptions of Persons Consenting to Such Experiments and Providing Penalties for Violations of the Act." "Yes——. No——.", and the unwary voter will be at a disadvantage, for the ballot contains no explanation, but simply appeals to the spirit of mercy. The bill is, of course, the work of the anti-vivisectionists, of which there are now ten societies in the United States, the newest one being the Colorado organization. The parent society seems to be the New York Anti-Vivisection Society—an organization that makes a pretense of mercy and human kindness in order that it may wage propaganda against the medical profession. From the literature which emanates from this Society it is very evident that it is controlled by the drugless practitioners. Some of the pamphlets—in fact many of them—have no reference to vivisection, as will be noted by the following titles: "Shall We Let the Doctors Enslave Us?", "Complete Failure of Medicine in the World War", "Dangers in the Use of Vaccines and Serums", "The Folly and Failure of the Old School Serum-Vaccine Method Versus the Glorious Record of Drugless Doctors in the Influenza Epidemic", "What Would Have Happened Without Osteopathy?", "What Would Have Happened Without Chiropractic?", etc., etc. It is enlightening to note that some of these pamphlets were written by the president of the National Association of Drugless Practitioners. Indiana may, in the none too distant future, be called upon to face just what Colorado is now facing, and Indiana physicians should be making it their business to acquaint the laity concerning the fanaticism, deceitfulness and fraud of these "uplifters" known as anti-vivisectionists.

In different parts of the country and especially in the East and Middle West, the various uplift schemes proposed by erstwhile leaders of

the medical profession are coming in for not only criticism but severe condemnation. This includes Compulsory Health Insurance, the Sheperd-Towner bill, lay domination of hospitals and the fixing of medical fees by lay persons, community and other clinics under federal, state or municipal control and a number of other Utopian and socialistic ideas which have either been advocated or permitted to become prominent through lack of opposition. Much criticism has been directed toward several of the A. M. A. officers who openly or tacitly have been supporting one or more of these various uplift schemes which, in the ultimate analysis, must prove detrimental to medical profession and public alike. However, some of the A. M. A. officials do not take kindly to criticism and are using the whole machinery of the A. M. A. office to not only voice their disapproval but to discredit the efforts of those who would oppose them. In fact they are trying to make the rank and file of the profession believe that those who dare to criticize officials of the A. M. A. who so long have told us how to act and even how to think, are proposing destructive programs and that their complaints are altogether unworthy of serious consideration. The A. M. A. bosses cry loudly for a *constructive* program when, as a matter of fact, all that is being offered by the opposition is a criticism of a really *destructive* program that has met with considerable favor and support on the part of leaders who ought to be against such socialistic and paternalistic measures as have been offered. Most of the numerous schemes that have been offered and to which the so-called "insurgents" are opposed are positively vicious in their tendencies and cannot help but work harm to the medical profession and to the public as well. They are socialistic and paternalistic in character and we want none of them. The discussion of the subject cannot be stopped by discrediting the men who are opposed to these schemes to socialize medicine, and the A. M. A. officers may find to their sorrow that in using the entire machinery of the A. M. A. to fight openly or by inference the work and opinion of these insurgents is bad policy. Some men get very much peeved if opposed or if anyone disagrees with them. We are confronted with the sins of omission as well as commission on the part of the leaders in our medical profession. We have a right and it is even our duty to oppose those leaders and their plans. The matter is deserving of serious consideration and is not going to be settled by resort to subterfuge, personal abuse, or unfair insinuation on the part of those who are in power in the A. M. A.

A CAMPAIGN is on to raise funds for the Riley Memorial Hospital. Newspapers and solicitors announce that the hospital is to be free to any

and all of the children of Indiana. If this means that medical and surgical services are to be free to rich and poor alike, then it is time for medical men and all others interested in fair play and in maintaining the self-respect of all citizens of the state to offer their opposition to the movement. From the first we have had a suspicion that the Riley Memorial Hospital would be a State institution, under State control (probably a lay board), with its policies dictated by lay individuals and its services open to rich or poor on the same terms and, as usual in such schemes, the medical men are the "goats", to say nothing of the tendency to pauperize communities. The worst of this feature is that some of our prominent medical men are said to be responsible for the scheme. If the Riley Memorial Hospital is another link in the chain of evidence which shows the drift toward socializing the practice of medicine then we probably have members of the medical profession in part responsible for the condition. We heartily favor the establishment of the Riley Memorial Hospital, open to any children of the State, but on the distinct understanding that those able to pay shall pay for the services rendered and the fee shall be in keeping with the ability of the patient to pay. There is absolutely no excuse for the establishment of a hospital under State control that furnishes *gratuitous* medical and surgical services to all who come. It is wrong in principle and will prove itself wrong in practice. The Indiana State Medical Association at its last session very properly passed a resolution favoring the establishment and maintenance of the Riley Memorial Hospital for the treatment and care of *indigent* children of the State. In reality it is the indigent children that need such an institution, for the well-to-do are able to secure such attention at any of our good hospitals and under the care of competent physicians and surgeons, whereas the latter institutions, except under very limited conditions, are not patronized by the poor, probably because of the implied obligation that the service and care is to cost something even though but a nominal sum. By all means let us care for the indigent children of Indiana and in the best manner possible, but while we are doing that we should not place the able to pay patients on a charity basis, thus creating the tendency to loss of self-respect and a general pauperization of the community. This is not a selfish argument in favor of members of the medical profession, even though medical men have a right to fight for their economic existence the same as anyone else, but it is a plea for a logical disposition of the matter with the best interests of both the public and the medical profession in view.

FROM the March number of the *Illinois Medical Journal*, we copy some correspondence and comments of the editor:

WAS IT A GREAT DAY FOR MICHIGAN DOCTORS?

January 20, 1922.

To the Editor:

We certainly had some meeting at Detroit. On Tuesday evening from six to one o'clock a. m. we mauled things over at the Detroit Athletic Club, and it was some hot session. We telephoned that President Burton of the University, Hugh Cabot and others could be present at the Councilors' meeting the next day. They were obliged to get up long before daylight and drive sixty miles in order to be present at our meeting at 8:30 in the morning. It was a case of Mohammed coming to the mountain instead of the mountain going to Mohammed. They brought the peace dove with them.

President Burton and Dr. Cabot said that they wanted to be with us, that they are against State Medicine, Compulsory Health Insurance, Community Hospitals, etc. They said further that through the extension service of the University they will deliver lectures all over the state of Michigan on what general medicine has done in the past, what it is doing at present and what it will do in the future; that they will not say a word against any cult or sect, which I think is very wise.

It is my belief that January 11 was one of the greatest days for medicine in the state of Michigan for many years. I am thoroughly convinced that the victory that the State Medical Society obtained over the University the other day at Detroit is largely due to the work of yourself and Dr. Bulson of Indiana. I wish that you would congratulate Dr. Bulson for me.

H. W. A.

Note and Comment:—Evidently some of the Michigan doctors feel that Burton and Cabot, *et al.*, have abandoned their former socialistic plans. Like the Scotchman, "I hae me doots". The leopard cannot change his spots; we are from Missouri and in this case have to be shown. All our life we have been watching the performance of medico-politico acrobats, jugglers, trained seals and tight rope walkers, and we feel that we are perfectly competent to recognize such performers when we see them.

Burton and Cabot have not reformed. At the meeting referred to above they camouflaged and sidestepped completely the fact that in the past they have been advocating socialized medical schemes, such as community clinics which they proposed, which would be a direct step toward placing the practice of medicine in Michigan under state control.

We believe with Dr. Albert E. Bulson, Jr., editor of the *Journal of the Indiana State Medical Association*, in his analysis of the Michigan proposition, when he says "that the community clinic which they proposed would be a direct step toward placing the practice of medicine in Michigan under state control. In fact, they boldly stated that these clinics in various sections of Michigan were to be conducted and controlled by the University, the latter of course being under state control. Just what the medical men of Michigan are thinking of to let the University of Michigan

pull off a stunt of that kind is more than I can understand. Furthermore, if the University of Michigan, as avowed in their statement just published, is to confine itself to teaching, why in the name of heaven have they arranged for enormous hospital facilities far beyond the needs of teaching purposes? There is a 'joker' in the whole program and the medical profession of Michigan may wake up when it is too late."

The Indiana State Journal passes the remark: "At last Michigan is Waking Up." Humph, strange how, when one is stretching and yawning and trying to become accustomed to the light of a new day, even though it is 11 a. m., that he labors under the impression that the rest of the world is just rising with him. Michigan has been awake many hours, Indiana. It has passed the early stage of criticism and fault-finding and is attempting to offer something that is constructive. Shake-a-leg, Hoosier brother; catch up with the crowd and let us have the benefit of your constructive advice. Let us have your aid in remodeling and revamping. What have you to offer?—*Journal Michigan State Medical Society*, March, 1922.

The above refers to our editorial note in a recent number of *THE JOURNAL* in which we called attention to what seems to be an awakening of the medical profession of Michigan to the dangers of socialized medicine as proposed and to an extent carried out by the University of Michigan, and by inference criticized by the editor of the *Journal of the Michigan State Medical Society* in recent numbers of his journal. We desire to remind our brother editor in Michigan that he was *not* awake when he permitted the University of Michigan to propose, months ago, some socialistic schemes which at that time he never criticized or opposed so far as we know. It was only after we complained about these socialistic schemes because both directly and indirectly they affected the whole medical profession, and the complaint was reiterated by prominent members of the medical profession of Michigan and elsewhere, that the editor of the *Journal of the Michigan State Medical Society* began to wake up. We are not quite satisfied that even yet he is awake, for unless we are badly mistaken he has been hypnotized by what apparently is a "turn about face" on the part of the authorities of the University of Michigan. However, as the editor of the *Illinois Medical Journal* says in commenting on the same subject. "I hae me doots" about the change of heart of those who have been advocating schemes that ultimately would annihilate private medical practice. It is a little amusing to hear those who have been criticized complain about fault-finders and ask for something *constructive*. Why, bless your soul, brother, we are busy enough right now trying to head off *destructive* and vicious measures that have been either advocated or supported by some of the leaders in

the medical profession, and in evidence we mention Compulsory Health Insurance, the Shepherd-Towner Bill, lay domination of hospitals and medical fees, and, last but not least, the effort to establish community clinics under state control—a most vicious project having inception in the minds of the authorities of the University of Michigan, publicly advocated and never receiving one word of disapproval from you until this Journal commented upon the matter. A constructive program will come soon enough when we pry some of you fellows loose from various uplift schemes that threaten the destruction of the private practice of medicine. Catch up with the crowd! Lord bless you, brother Editor, we don't want to catch up with a crowd that is trying to foist state controlled community clinics upon us unless to "catch up" gives us an opportunity to change the course of those who are leading themselves as well as the rest of us into danger.

DEATHS

SAMUEL A. KENNEDY, M.D., died at his home in Indianapolis at the age of 92 years.

WILLIAM H. BANKS, M.D., died at his home in Waymansville, March 2, at the age of 84 years.

HENRY W. JONES, M.D., died March 3 at his home in Spiceland. Dr. Jones graduated from the Cincinnati College of Medicine and Surgery in 1875.

W. N. WILLIAMSON, M.D., died Tuesday, February 21, at his home in Indianapolis. Dr. Williamson graduated from the Medical College of Indiana, Indianapolis, in 1880.

WILLIAM P. KOCHENOUR, M.D., died at his home near Rego at the age of 74 years. Dr. Kochenour graduated from the Hospital College of Medicine, Louisville, Kentucky, in 1884.

OLIVER F. GRAY, M.D., of Spencer, died recently after a short illness. Dr. Gray graduated from the Indiana Medical College, Indianapolis, in 1878. He was a member of the Owen County Medical Society and the Indiana State Medical Association.

SAMUEL M. VORIS, M.D., died February 21, 1922, at his home in Columbus, aged seventy-six years. Dr. Voris was a graduate of the Jefferson Medical College, of Philadelphia, and was a member of the Bartholomew County Medical Society and the Indiana State Medical Association.

CHARLES C. GIVENS, M.D., aged 72 years, died as the result of an accident when his automobile was struck by a train. Dr. Givens graduated from the Louisville Medical College in 1882 and was a member of the Vigo County Medical Society and the Indiana State Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

THE Decatur County Medical Society held a banquet at Vevay, February 16.

DR. R. F. BLOUNT, of Wabash, celebrated his ninety-first birthday February 12.

DR. JOSEPH H. CASPER has opened an office in the Steinkemp Building, Jasper.

DR. W. T. LAWSON was elected Health Commissioner of Hendricks County in January.

THE Lawrence County Medical Society held its regular meeting at Mitchell, February 1.

DR. W. F. BUTLER, of Cayuga, was injured when he fell down a flight of steps February 9.

A WARD for colored patients is to be added to the Irene Byron Tuberculosis Hospital, Fort Wayne.

DR. D. R. GOOD, of Boggstown, has removed to Newport, where he will take up the practice of medicine.

DR. MILES F. PORTER, SR., of Fort Wayne, has been made a member of the Indiana State Anatomical Board.

DR. M. MAY ALLEN has been made assistant director of the child hygiene division of the State Board of Health.

THE Putnam County Orphans' Home at Greencastle was destroyed by fire, the loss being estimated at approximately fifteen thousand dollars.

THE Elkhart County Medical Society held its annual meeting at South Bend, February 4. More than one hundred physicians attended the meeting.

DR. J. H. ALLEN, of Patricksburg, has purchased the office and home of Dr. Black at Fishers and will locate there for the practice of medicine.

DR. HENRY LOGAN, of Rushville, was injured February 20 when the automobile in which he was riding was struck by a train. The injuries were not serious.

THE Orange County Medical Society held a meeting February 7 at Orleans. A paper was presented by Dr. Wilson on "Vaccines and Organo-therapy".

DR. RAYMOND STENGER, of the medical staff of the National Military Sanitarium, near Marion, and Miss Inez Worley, of Marion, were married February 9.

DR. LOUIS A. BOLLING, of Attica, has accepted a position with the government and will be stationed at the clinic for veterans of the World War at Washington, D. C.

THE annual meeting of the Daviess-Martin County Medical Society was held February 22 at Washington. Dr. W. H. Foreman, of Indianapolis, presented a paper.

THE Madison County Medical Society held its meeting at Anderson, February 22. A paper on "Non-Infectious Diseases and Anaphylaxis" was presented by Dr. W. H. Miley.

THE Marion County Medical Society held a meeting at Indianapolis, February 26. Dr. E. E. Rosenow, of the Mayo Clinic, presented an illustrated lecture on "Focal Infections".

THE death rate of New York State for the year 1921 is the lowest ever recorded for it, being 12.2 per thousand of population. The rate in 1920 was 13.8, and in 1914, 14.7.

PLANS have been approved by the Lake County board of commissioners for a modern county tubercular sanitarium to be situated on a 120 acre tract of land near Crown Point.

A CAMPAIGN has been started to raise \$350,000 for the building of a 100-room wing, contagious department, and a nurses' training school at St. Elizabeth's Hospital, Lafayette.

THE Huntington County Medical Society held its annual banquet February 7 at Huntington. Papers were presented on "Dislocation of the Shoulder Joint", by Dr. W. C. Moore, and "Treatment of Cancer", by Dr. B. F. Kirkland.

THE Wells County Medical Society held a meeting at Bluffton, February 21. Dr. E. E. Morgan, of Fort Wayne, presented a paper on "Pruritis Anis" and Dr. W. D. Calvin, of Fort Wayne, read an article on venereal disease.

DR. GEORGE T. MCCOY, of Columbus, has been made president of the Indiana Tuberculosis Society to succeed Dr. Eric Crull, of Fort Wayne, at the closing session of the eleventh yearly conference in Indianapolis.

ARRANGEMENTS have been made by Goshen physicians and the management of the Goshen Hospital Association to purchase an x-ray equipment at a cost of \$3,500, which will soon be installed in the hospital.

A JOINT meeting of the Bartholomew and Jackson County Medical Societies was held February 2 at Seymour. Dr. A. G. Osterman, of Seymour, presented a paper on "Pneumonia and Its Treatment".

THE Clinton County Medical Society held its regular monthly meeting February 2 at Frankfort. Dr. W. C. Mount, of Kirklin, presented a paper, the subject of which was "Early Diagnosis and Treatment of Surgical Cases".

THE Kosciusko County Medical Society held its regular monthly meeting January 31, at Warsaw. A paper on "Control of Venereal Diseases" was presented by Dr. J. G. Royse, of Indianapolis.

A BOND issue of \$150,000 for the construction of additional hospital facilities at the Marion County Hospital for the Insane at Julietta was approved by the Marion county council at a recent meeting.

Archives of Occupational Therapy is a new periodical, the official organ of the American Occupational Therapy Association. It is edited by Dr. William R. Dunton, and will be published bimonthly.

DR. F. W. GREGOR, of Indianapolis, announces that he has associated with him Dr. F. M. Gastineau, formerly of Bellevue and New York Skin and Cancer Hospitals, in the practice of dermatology and allied conditions.

THE annual meeting of the Children's Aid Association was held in Indianapolis February 13. Dr. C. C. Carstens, of New York, director of the Child Welfare League of America, spoke on "Newer Movements in Child Welfare".

DR. HUBERT WORK, President of the American Medical Association, who has been serving as assistant postmaster general during the present administration, has been promoted to postmaster general to succeed Mr. Hayes, resigned.

THE regular meeting of the Muncie Academy of Medicine was held Friday, February 10. A paper on "Early Signs of Neuro-Syphilis" was presented by Dr. L. D. Carter, of Indianapolis, and Dr. C. A. Ball presented a paper on "Infant Feeding".

THE Delaware-Blackford County Medical Society held its regular meeting at Muncie, February 3. A paper was presented by Dr. William Engleboch, of St. Louis, on "Diagnosis and Treatment of Disorders of the Endocrine Glands".

DR. B. D. MYERS, of Bloomington, has been made a member of a committee of the Association of American Medical Colleges which is to draft a course of study that will serve as a basis for the curriculums of the leading medical schools of the United States.

PROF. VERNON LYMAN KELLOGG, zoologist and secretary of the National Research Council, Washington, D. C., and John W. Davis, attorney, New York City, formerly ambassador to Great Britain, have been elected trustees of the Rockefeller Foundation.

THE next meeting of the Northern Tri-State Medical Association will be held at Ann Arbor, Michigan, Tuesday, April 11. The number of papers to be presented has been limited that the program will not be crowded. The University is arranging some excellent clinics for the morning session.

DR. K. K. WHEELOCK, of Fort Wayne, will sail from New York on March 21 to visit Italy, Australia, Germany, Switzerland, France, England, Scotland, Belgium and Holland. Dr. Wheelock will visit his daughter, who is in Sicily, and expects to take up special study of the eye, ear, nose and throat in Vienna.

IT has been announced that the General Education Board of the Rockefeller Foundation has appropriated during the last fiscal year \$18,210,353 for colleges and universities, \$12,029,513 for medical schools, and \$646,000 for negro education. Since its establishment in 1902 this Board has appropriated \$89,017,872.

ARRANGEMENTS have been completed for a health exposition to be held at Indianapolis in May. Exhibits will be presented by more than

one hundred health educational organizations throughout the United States. The exposition is an outgrowth of the Indianapolis Public Health Institute which was held February 13-18.

WESTERN RESERVE UNIVERSITY is the recipient of a gift of a sufficient amount of money, from Samuel Mather, to erect new medical school buildings which are to be "the finest in the country". No amount is specified in the gift, but the architect's estimate calls for approximately \$2,530,000. Construction is to be begun this spring.

THE regular monthly meeting of the LaPorte County Medical Society was held February 10 at the LaPorte Y. M. C. A. Dr. Burton Haseltine, Professor of Head Surgery, Hahn Medical College, presented a paper on Sinus Infections, the discussion of which was led by Drs. H. L. Brooke and M. S. Smith. Clinical cases were presented by local members of the Society.

INFLUENZA statistics for the first six weeks of 1922 show a greater number of cases of this disease than a similar period last year, but the present situation is not at all comparable to conditions existing in 1919-1920. For the first six weeks of 1922, 28,075 cases of influenza were reported in 24 states; for 1921, in 22 states, there were 4,143 cases; and for 1920, in 23 states, there were 477,289 cases.

DR. FREDERICK R. GREEN, who has been connected with the headquarters office of the American Medical Association since the year 1905, and has served as secretary of the Council on Health and Public Instruction since its organization in 1910, has resigned, the resignation taking effect on March 31. Dr. Green has formed a partnership with Dr. C. St. Clair Drake and Dr. John Dill Robertson for the publication of *Health*, a popular monthly magazine.

UNDER an executive order recently issued by President Harding, surplus medicines and medical, surgical and hospital supplies held by the War, Navy and Treasury departments and the Shipping Board will be made available for the Russian relief. The supplies will be delivered to the American Relief Administration within four months' time, and will not exceed \$4,000,000 in original cost to the Government. The relief association is authorized to make the distribution of the materials through its own agencies or those of other relief organizations operating in Russia which may be found in a better position to distribute the supplies to centralized localities.

DURING February the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: Persson Laboratories—Bacillus Coli Antigen (No. 50)-Persson, Furunculosis Vaccine Mixed (No. 37)-Persson, Gonococcus Antigen (No. 47)-Persson, Staphylococcus Aureus Antigen (No. 49)-Persson, Streptococcus Antigen (No. 48)-Persson, Pneumonia Vaccine (No. 36)-Persson. Powers-Weightman-Rosen-garten Co.—Novarsenobenzol-Billon. G. H. Sherman—Whooping Cough Vaccine-Sherman, Mixed Typhoid Vaccine-Sherman, Acne Staphylococcus Vaccine-Sherman. Winthrop Chemical Co.—Alypin.

SOCIETY PROCEEDINGS

COUNCILORS' MEMBERSHIP CONTEST

District	Councilor	Number of Counties	1921 Membership	1922 Membership to Date	Per-centage
First	Dr. Willis	7	176	159	.90
Second	Dr. Schmadel	7	149	128	.86
Third	Dr. Leach	9	130	104	.80
Fourth	Dr. Osterman	10	138	132	.95
Fifth	Dr. Weinstein	5	158	146	.92
Sixth	Dr. Spilman	8	150	147	.98
Seventh	Dr. Earp	4	425	377	.89
Eighth	Dr. Conrad	5	172	138	.80
Ninth	Dr. Moffit	10	253	234	.93
Tenth	Dr. Shanklin	5	151	112	.73
Eleventh	Dr. Black	6	191	178	.93
Twelfth	Dr. Morgan	8	241	206	.86
Thirteenth	Dr. Betteling	8	274	243	.89
		92	2608	2304	

THE TRUTH ABOUT MEDICINES

PROPAGANDA FOR REFORM

BUTYN, A NEW SYNTHETIC LOCAL ANESTHESIA.—A committee of the A. M. A. Section on Ophthalmology reports to the Council on Pharmacy and Chemistry on the clinical use of butyn in operations on the eye, nose and throat. The committee finds butyn preferable to cocaine as an anesthetic in operation on the eye. One member of the committee also reports favorably on its use in operations on the nose and throat. As a result of the clinical and experimental use of butyn, the committee arrives at the following conclusions: 1. It is more powerful than cocaine, a smaller quantity being required. 2. It acts more rapidly than cocaine. 3. Its action is more prolonged than that of cocaine. 4. According to our experience to date, butyn in the quantity required is less toxic than cocaine. 5. It produces no drying effect on tissues. 6. It produces no change in the size of the pupil. 7. It has no escharotic effect and therefore causes no shrinking of tissues. 8. It can be boiled without impairing its anesthetic efficiency.—(*Jour. A. M. A.*, Feb. 4, 1922, p. 345).

WILLARD EALON OGDEN, SPECIALIST IN PROCTOLOGY.—Dr. Willard E. Ogden, Chicago, claims to be a specialist in proctology, author of "Improved Method of Treating Rectal Diseases", to have been associated with the leading proctologists of America, and to have developed a method of office treatment which is not taught by any other practitioner. He offers to instruct physicians in his methods. In 1914 Ogden advertised in Chicago newspapers to cure piles. In 1921 Ogden had a copyrighted mail-order course of the treatment of rectal diseases by improved methods. Careful search fails to disclose that Dr. Willard E. Ogden has ever distinguished himself in the prac-

tice of specialties in which he now wishes to instruct physicians, that he has never published a paper on any phase of medicine or surgery, or that he has been associated with the leading proctologists of America.—(*Jour. A. M. A.*, Feb. 4, 1922, p. 368).

MERCURIC CADYOLATE.—As cacodylates have been found practically worthless in the treatment of syphilis, mercuric cacodylate must be considered as merely an administration form of mercury. It contains but one-half as much mercury as mercuric salicylate. The two preparations cannot be compared with each other as to local or general action for the reason that the cacodylate is soluble while the salicylate is practically insoluble. The cacodylate has to be administered daily to maintain adequate action. Mercuric salicylate is a favorite drug because of the argument that, being insoluble, it forms a depot of mercury in the tissues so that a week's dose may be administered at one time. To keep the patient under as continuous mercurilization as would be secured by the ordinary dose of 0.10 Gm. of mercuric salicylate given once a week, six doses of 0.04 Gm. of cacodylate would have to be given: in other words, a daily dose excepting Sunday. The pain and induration induced by mercuric salicylate is the price the patient must pay for the convenience of weekly administration.—(*Jour. A. M. A.*, Feb. 11, 1922, p. 452).

STYPTYSATE NOT ADMITTED TO N. N. R.—Styptysate, according to the advertising of Ernst Bischoff Co., Inc., is "obtained by dialysis from Bursa Pastoris (Shepherd's (sic) purse)". It is claimed to be "The Remedy for Hemorrhages", to be "Superior to Ergot and Hydrastis", "of particular advantage in Meorrhagia and Metorrhagia" and to have been "found of great value in vesicle hemorrhages and hemorrhages from mucous membranes in general". According to the label, Styptysate is "made in Germany", but the name of the German manufacturer is not given. According to German publications, a proprietary called Styptysate and made from shepherd's purse—a common weed—was used in Germany as a substitute for ergot when this drug was not obtainable. On the assumption that the product discussed in German publications is the Styptysate marketed in the U. S., the best that can be said for it is that, during a shortage of ergot, it was used in place of that established drug. The Council on Pharmacy and Chemistry reports that Styptysate (Ernst Bischoff & Co., Inc.) is inadmissible to New and Nonofficial Remedies because its composition is semisecret and indefinite, and there is no evidence that its uniformity and strength is controlled; further, it is inadmissible because the therapeutic claims advanced for it are exaggerated and unwarranted and because there is no evidence that it possesses any advantage over established drugs, such as the biologically standardized fluidextract of ergot or the definite ergot preparations admitted to New and Nonofficial Remedies.—(*Jour. A. M. A.*, Feb. 11, 1922, p. 450).

IRON THERAPY.—Iron has so long been administered in some form or other in the treatment of anemia that one might well suppose that its function in the regeneration of blood had been clearly determined. This is far from being the case. Last year, Whipple and his associates reported that iron given as Blaud's pills had no influence on the rate of blood regeneration in secondary anemia produced in animals. They reported that there is some experimental evidence for the administration of blood in secondary anemia, but state that whole red cells or hemoglobin given by mouth in the form of a dry powder do not appear to influence profoundly the blood regeneration curve. Their experiments show that hemoglobin has a distinct influence on blood regeneration, but not sufficient to warrant its use in uncomplicated second-

ary anemia in view of the favorable action of meat and other diet factors. Musser has studied the effect of inorganic iron in a type of anemia representing more closely what is seen in clinical medicine. He found that ferrous carbonate failed to produce any alteration of the experimental hemorrhagic anemias. All of the more recent evidence indicates that the iron is of paramount importance in red blood cell regeneration.—(*Jour. A. M. A.*, Feb. 18, 1922, p. 512).

Urotropin was removed from the list of articles accepted for New and Nonofficial Remedies because Schering & Glatz, Inc., refused to place the U. S. Pharmacopeia name hexanethylenamine (hexamethyleneamine) on the label and in its advertising so as to make clear to physicians the identity of the product, and because it was sold under therapeutic claims which the Council held unwarranted. An advertising pamphlet sent to physicians in 1921 contains a number of unwarranted statements; particularly objectionable are the claims made for the use of Urotropin as an antiseptic in body fluids that are alkaline, such as the cerebro-spinal fluid, bile, aqueous humor of the eye, saliva, the excretions caused by middle ear infection and other excretions of the nasal, bronchial, laryngeal and mucous membranes. The lack of efficacy of hexanethyleneamine in alkaline secretions is generally admitted, and the clinical references to the use of hexanethyleneamine in the pamphlet are obsolete. In the introduction to the pamphlet, Schering & Glatz state that they are well acquainted with the scientific research work discrediting the efficiency of hexanethyleneamine in non-acid media, but that they feel that the accumulated evidence for its efficacy in such conditions should not be "brushed aside". However, the pamphlet is not made up of quotations, but of unqualified statements. With one exception, all reference to the antiseptic properties of the drug in alkaline media are previous to 1913, that is, before the importance of reaction of the medium was fully appreciated. To quote these earlier articles, without regard to the later work which in most eyes discredited them, constitutes in effect an exploitation of this brand of hexanethyleneamine under unwarranted therapeutic claims.—(*Jour. A. M. A.*, Feb. 18, 1922, p. 531).

LIPOIDAL SUBSTANCES (HOROVITZ BIO-CHEMIC LABORATORIES CO.) NOT ADMITTED. According to the Horovitz Bio-Chemic Laboratories Co. (A. S. Horovitz, president), Horovitz has discovered or developed a treatment for drug addiction. This is marketed by the Horovitz Bio-Chemic Laboratories as Lipoidal Substances. The treatment consists, first, in the withdrawal of the narcotic; second, in free catharsis; and third, in the intramuscular injection of the preparation. In its request for the admission of Lipoidal Substances to New and Nonofficial Remedies, the Horovitz Bio-Chemic Laboratories Co. informed the Council on Pharmacy and Chemistry that the product contained lipoids of plant origin, vitamins (water-soluble) of plant origin and nonspecific plant proteins. While the communication abounded in generalities, it gave neither the identity nor character of the lipoids, of the vitamins, nor of the nonspecific protein, nor their quantities or the methods for their control. The firm presented no evidence that the injection of Lipoidal Substances produces any effect other than by suggestion. The Council declared Lipoidal Substances inadmissible to New and Nonofficial Remedies because the composition is essentially secret and because the curative claims are unsubstantiated and therefore unwarranted.—(*Jour. A. M. A.*, Feb. 25, 1922, p. 600).

BIO-CHEMIC LABORATORIES' PRODUCTS.—The Bio-Chemic Laboratories, Chicago and Los Angeles, send out the following advertising: 1. "Salvarsan and

Mercury Without the Needle". In this pamphlet the use of Salv-Absorbs and Merc-Absorbs, preparations for the rectal administration of arsphenamine and mercury, respectively. 2. "Something New in Glandular Therapy—Caplets". This circular declares that "Caplets make possible the preparation of any pluriglandular combinations in your office * * * Your office girl can make them up for you". 3. "Why Gland Transplantation?" A circular devoted to "Orch-Absorbs" which is said to be "a preparation of interstitial glands for intra-rectal administration". No preparation of the Bio-Chemic Laboratories has been accepted for New and Nonofficial Remedies. The Council on Pharmacy and Chemistry, however, has published a report on another proprietary form of administering arsphenamine by rectum. This brings out the lack of evidence for the efficacy of this method of arsphenamine administration. The pluriglandular "Caplet" medication is a form of shotgun therapy that has been the subject of a report of the Council on Pharmacy and Chemistry and has been discussed editorially.—(*Jour. A. M. A.*, Feb. 25, 1922, p. 603).

NEW AND NONOFFICIAL REMEDIES

ANIMAL EPIDERMAL EXTRACT ALLERGENS-SQUIBB.—Powders representing the alkali-soluble protein from the hair and epidermis of animals or from the feathers of fowls. Animal Epidermal Extract Allergens-Squibb are employed for the diagnosis of asthma or perennial rhinitis. The patient's susceptibility may be tested in the same manner as that employed for pollen extracts. They are not intended for treatment. The following allergens have been accepted: Burro Dander Allergen-Squibb, Burro Hair Allergen-Squibb, Cat Dander Allergen-Squibb, Cat Hair Allergen-Squibb, Chicken Feathers Allergen-Squibb, Cow Dander Allergen-Squibb, Cow Hair Allergen-Squibb, Dog Dander Allergen-Squibb, Dog Hair Allergen-Squibb, Duck Feathers Allergen-Squibb, Goose Feathers Allergen-Squibb, Horse Dander Allergen-Squibb, Horse Hair Allergen-Squibb, Rabbit Dander Allergen-Squibb and Rabbit Hair Allergen-Squibb. E. R. Squibb & Sons, New York.—(*Jour. A. M. A.*, Feb. 4, 1922, p. 349).

BACTERIAL ALLERGENS - SQUIBB.—Protein extracted from bacterial cells. Bacterial proteins have been used cutaneously for the diagnosis of anaphylaxis to the metabolic products from specific bacteria. Their utility is debatable. The following allergens have been accepted: *Bacillus Coli* Allergen-Squibb, *Bacillus Pertussis* Allergen-Squibb, *Bacillus Typhosus* Allergen-Squibb, *Catarrhalis* Allergen-Squibb, *Gonococcus* Allergen-Squibb, *Pneumococcus-I* Allergen-Squibb, *Pneumococcus-II* Allergen-Squibb, *Pneumococcus-III* Allergen-Squibb, *Pneumococcus-IV* Allergen-Squibb, *Staphylococcus Albus* Allergen-Squibb, *Staphylococcus Aureus* Allergen-Squibb, *Streptococcus Pyogenes* Allergen-Squibb, and *Streptococcus Viridans* Allergen-Squibb. E. R. Squibb & Sons, New York.—(*Jour. A. M. A.*, Feb. 4, 1922, p. 349).

BUTYN.—Paraminobenzoyl-gammadinormal butylaminopropanol sulphate. It is a local anesthetic proposed as a substitute for cocaine, particularly in surface anesthesia, as for the eye, nose and throat. It has the advantage of acting through intact mucose almost as effectively as cocaine. On the normal human eye, a 0.5 percent solution of butyn is less effective than a 1 percent solution of phenacain, but more efficient than a 1 percent solution of cocaine or a 1 percent solution of eucain. Butyn has been used with success in practically all operations on the eye and in some operations on the nose and throat. Butyn is supplied in solution and also as Butyn Solution, 2

percent; Butyn Tablets, 0.2 gm., and Butyn and Epinephrin Hypodermic Tablets. The Abbott Laboratories, Chicago.

SOLUTION OF POST-PITUITARY-G. W. CARNICK CO.—An extract of the posterior lobe of the pituitary body of cattle, standardized to have the same strength as liquor hypophysis U. S. P. For a discussion of the uses and dosage see New and Nonofficial Remedies under Pituitary Gland and Solution of Hypophysis. Solution of Post-Pituitary is supplied in 1 Cc. ampules. G. W. Carnick Co., New York.

PITUITRIN "O".—An extract of the posterior lobe of the pituitary of cattle, approximately 2½ times the strength of Solution of Hypophysis U. S. P. For a discussion of the actions and uses see article Pituitary Gland, New and Nonofficial Remedies 1921, p. 219. Pituitrin "O" is supplied in 0.5 Cc. and 1 Cc. ampules. Parke, Davis & Co., Detroit.—(*Jour. A. M. A.*, Feb. 11, 1922, p. 431).

ALYPIN.—The hydrochlorid of 2-benzoxy-2-dimethyl-amino-methyl-1-dimethyl-amino-butane. Alypin is a local anesthetic claimed to be equal to procain, but is not a mydriatic. It is said not to produce disturbance of accommodation and to be less toxic than cocaine. But the evidence as to the relative toxicity of alypin and cocaine is conflicting. Alypin is used in solutions having about the same strength as solution of cocaine hydrochlorid. Winthrop Chemical Co., New York.

NOVARSENOBENZOL-BILLON.—A brand of neoarsphenamine-N. N. R. Marketed in 0.6 Gm. and 0.9 Gm. ampules. Manufactured under license from Les

Etablissements Poulen Freres, Paris, and the Chemical Foundation, Inc. Powers-Weightman-Rosengarten Co., Philadelphia.

WHOOPING COUGH VACCINE-SHERMAN.—Pertussis bacillus vaccine (see New and Nonofficial Remedies 1921, p. 303) marketed in 10 Cc. vials. G. H. Sherman, Detroit.

MIXED TYPHOID VACCINE-SHERMAN.—A typhoid vaccine (see New and Nonofficial Remedies 1921, p. 210) marketed in 10 Cc. vials each cubic centimeter containing 1,000 million killed typhoid bacilli and 500 million each of paratyphoid bacilli A and B. G. H. Sherman, Detroit.

ACNE STAPHYLOCOCCUS VACCINE-SHERMAN.—A mixed vaccine (see New and Nonofficial Remedies 1921, p. 314) marketed in 10 Cc. vials each cubic centimeter containing 40 million killed acne bacilli and 1,000 million killed Staphylococcus albus. G. H. Sherman, Detroit.

BACILLUS COLI ANTIGEN (No. 50)-PERSSON.—A colon bacillus vaccine (see New and Nonofficial Remedies 1921, p. 299) marketed in 20 Cc. vials, each cubic centimeter containing 1,000 million killed colon bacteria. Persson Laboratories, Mount Clemens, Michigan.

FURUNCULOSIS VACCINE MIXED (No. 37)-PERSSON.—A staphylococcus vaccine (see New and Nonofficial Remedies 1921, p. 306) marketed in 20 Cc. vials, each cubic centimeter containing 2,000 million killed staphylococci aurens and 2,000 million killed staphylococci albns. Persson Laboratories, Mount Clemens, Michigan.

(Continued on Advertising Page XX)

The Ten Commandments of Medical Ethics

By DR. FRANK B. WYNN

Reproduced from "The Physician"

Artistically printed in colors and handsomely illuminated by an especially designed border illustrating the History of Medicine in Symbolism. Size 17 x 22 inches, suitable for framing; price, postpaid, \$2.00. For sale by F. E. Dillan, publisher, 817 Hume-Mansur building Indianapolis, Indiana.



A Bloodless Field is promptly produced by the application or hypodermatic injection of Suprarenalin Solution, 1:1000

—the stable and non-irritating preparation of the Suprarenal active principle. The e. e. n. and t. men find it the premier product of the kind.

Ischemia follows promptly the use of 1:1000 Suprarenalin Solution slightly warmed (make 1:1000 solution by adding 1 part of Suprarenalin Solution to 9 parts of sterile normal salt solution).

In obstetrical and surgical work Pituitary Liquid (Armour), physiologically standardized, gives good results— $\frac{1}{2}$ c. c. ampoules obstetrical—1 c. c. ampoules surgical. Either may be used in emergency.

Elixir of Enzymes is a potent and palatable preparation of the ferments active in acid environment—an aid to digestion, corrective of minor alimentary disorders and a fine vehicle for iodides, bromides, salicylates, etc.

As headquarters for the organotherapeutic agents, we offer a full line of Endocrine Products in powder and tablets (no combinations or shotgun cure-alls).



Armour's Sterile Catgut Ligatures are made from raw material selected in our abattoirs, plain and chromic, regular and emergency lengths, iodized, regular lengths, sizes 000—4.

Literature on Request

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CHICAGO

SAVE MONEY ON YOUR X-RAY SUPPLIES

Get Our Price List and Discounts on Quantities Before You Purchase

HUNDREDS OF DOCTORS FIND WE SAVE THEM FROM 10% TO 25% ON X-RAY LABORATORY COSTS

AMONG THE MANY ARTICLES SOLD ARE

X-RAY PLATES. Three brands in stock for quick shipment. PARAGON Brand, for finest work; UNIVERSEAL Brand, where price is important.

X-RAY FILMS. Duplitized or Double Coated—all standard sizes. X-Diograph (metal backed) dental films at new, low prices Eastman films, fast or slow emulsion.

BARIUM SULPHATE. For stomach work. Finest grade. Low price. COOLIDGE X-RAY TUBES. 5 Styles. 10 or 30 milliamper.—Radiator (small bulb), or broad, medium or fine focus, large bulb. Lead Glass Shields for Radiator type.

DEVELOPING TANKS. 4 or 6 compartments stone, will end your dark room troubles. 5 sizes of Enamelled Steel Tanks.

DENTAL FILM MOUNTS. Black or gray cardboard with celluloid window or all celluloid type, one to eleven film openings. Special list and samples on request. Price includes your name and address.

DEVELOPER CHEMICALS. Metal, Hydroquinone, Hypo, etc.

INTENSIFYING SCREENS. Patterson, TE, or celluloid-backed screens. Reduce exposure to one-fourth or less. Double screens for film. All-metal Casettes.

LEADED GLOVES AND APRONS. (New type glove, lower priced.)

FILING ENVELOPES with printed X-Ray form. (For used plates.) Order direct or through your dealer.

If You Have a Machine Get Your Name on Our Mailing List

GEO. W. BRADY & CO.
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Nausea of Pregnancy

In some instances is being controlled and in many is being alleviated by the hypodermic injection of

LUTEIN SOLUTION

H. W. & D.

A sterile solution of Corpus Luteum, each cubic centimeter containing the purified water soluble extractive of two decigrams of the dried substance, in ampules

"H. W. & D." — Specify — "H. W. & D."

Reprint of an authoritative article on its use will be supplied upon request.

Hynson, Westcott & Dunning

BALTIMORE—MARYLAND

(Continued from page 108)

STAPHYLOCOCCUS AUREUS ANTIGEN (No. 49)-PERSSON.—A staphylococcal vaccine (see New and Nonofficial Remedies 1921, p. 306) marketed in 20 Cc. vials, each cubic centimeter containing 3,000 million killed staphylococcus aureus. Persson Laboratories, Mount Clemens, Michigan.

GONOCOCCUS ANTIGEN (No. 47)-PERSSON.—A gonococcus vaccine (see New and Nonofficial Remedies 1921, p. 300) marketed in 20 Cc. vials, each cubic centimeter containing 3,000 million killed gonococci. Persson Laboratories, Mount Clemens, Michigan.

STREPTOCOCCUS ANTIGEN (No. 48) - PERSSON.—A streptococcus vaccine (see New and Nonofficial Remedies 1921, p. 309) marketed in 20 Cc. vials, each cubic centimeter containing 1,000 million killed streptococci. Persson Laboratories, Mount Clemens, Michigan.

PNEUMONIA VACCINE (No. 36)-PERSSON.—A pneumococcus vaccine (see New and Nonofficial Remedies 1921, p. 304) marketed in 30 Cc. vials, each cubic centimeter containing 8,000 killed pneumococci, Types I, II, III and Group IV in equal proportions. Persson Laboratories, Mount Clemens, Michigan.—(*Jour. A. M. A.*, Feb. 25, 1922, p. 581).

BOOK REVIEWS

GENERAL PATHOLOGY—An Introduction to the Study of Medicine. Being a Discussion of the Development and Nature of Processes of Disease. By Horst Oertel, Strathcona Professor of Pathology

and Director of the Pathological Museum and Laboratories of McGill University and of the Royal Victoria Hospital, Montreal, Canada. Cloth, 1P. 357, with Illustrations. Price \$5.00 net. New York: Paul B. Hoeber.

Oertel has given us, in these 357 pages, a text-book which the average practitioner can read with both pleasure and profit. This statement will not apply to many text-books on the subject of general pathology. The book gives, in a compact form, an illuminating picture of the present status of general pathology. The author's style is commendable. A reviewer in the *J. A. M. A.* criticized this book rather severely; it must be admitted that much of this criticism was justifiable. It was inexcusable for the author to have misspelled names and words, to have made no mention of the water transmission of typhoid, and to have omitted all reference to the flea in connection with rat plague. Most of the errors are found in connection with subjects which pertain to bacteriology. The balance of the book is of sufficient value to justify the reviewer in recommending it to the readers of THE JOURNAL.

SOCIAL DISTINCTIONS

Little Elnoe—What does your papa do?

Little Florence—He's a horse doctor.

"Then I guess I'd better not play with you; I'm afraid you don't belong to our set."

"I don't see why. What does your papa do?"

"He's a veterinary surgeon."—*Cincinnati Times-Star*.

6 Points to Remember when Choosing Mead's Dextri-Maltose to Modify Cow's Milk for Bottle Babies

Point No. 1

It does not have directions on the package, as these interfere with the doctor's instructions to mothers.

Point No. 2

It is not advertised in the women's magazines and other lay papers, as this is unethical.

Point No. 3

Literature on infant feeding is not mailed to mothers.

MEAD'S

DEXTRI-MALTOSE (Dextrins and Maltose)

Has been used by thousands of physicians for over 10 years because it gives gratifying results in infant feeding and because it is a strictly ethical product.

A Three Way Winner

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'THE JOURNAL OF THE Indiana State Medical Association

Owned, Published and Controlled by the Indiana State Medical Association

ISSUED MONTHLY under the Direction of the Council

Volume XV
Number 4

FORT WAYNE, IND., APRIL 15, 1922

Per Year, \$3.00
Single Copy, 30 Cents

CONTENTS

ORIGINAL ARTICLES

PAGE

Biliary Infections. John W. Sluss, Indianapolis	109
Diagnostic Uses of the Duodenal Tube. G. W. McCaskey, Fort Wayne	114
State Medicine. Charles S. Boeselbury, South Bend	117
An Old Indiana Book on Medicine. A Bit of Indiana Medical History. J. N. Hurty, Indianapolis	122
The Physician. How May He Grow Old Gracefully? Frank B. Wynn, Indianapolis	124

EDITORIALS

PAGE

Vaccines in Whooping Cough	130
Paternalistic Medicine	130
National Hospital Day	131
Medical Politics	131
"Fair Play to the Public"	132
Editorial Notes	132

(Continued on Advertising Page VIII)

Next Annual Session, Muncie, September 27, 28, 29, 1922. List of Officers and Committees on Adv. Page 2. Entered as Second Class Matter, January 20, 1908, at the Postoffice at Fort Wayne, Indiana, under Act of Congress of March 3, 1879. Accepted for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized October 18, 1918.

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ALBERT E. BULSON, Jr., B.S., M.D., Editor and Manager

OFFICE OF PUBLICATION: 406 West Berry Street, FORT WAYNE, INDIANA

VOLUME XV

APRIL 15, 1922

NUMBER 4

ORIGINAL ARTICLES

BILIARY INFECTIONS*

JOHN W. SLUSS, M.D.
INDIANAPOLIS, INDIANA

Fashions, fancies, and fads hold sway in medicine as elsewhere. Illustrations are not far to seek.

In times past, it has been (to cite a single example) the fashion with our predecessors of a particular period to attribute most of the body's ills to some perversity of the liver, or to the humors in some occult manner arising therein. The liver bulked so large in their pathological notions as to overshadow all else. Even so, it is not certain that they may not have had something the better of us who, in these latter days, in our disease summations, fail in such degree to take this important viscus into account.

Liver Relations and Functions. Its morphological and anatomical relations are immensely significant. No disorder in the digestive tube can be properly considered apart from it, for like the pancreas, it is embryologically a very special elaboration of the same primitive cell groups that form the epithelia of the stomach and duodenum. The operation of its cells profoundly interests those of other organs. It seems to be demonstrated, even, that the brain itself cannot exist without the liver. A normal liver function is the "sine qua non" to normal brain function. Indeed, lay writers of all times have imagined an intimate connection between quality of thought—in other words, temperament—and certain hepatic states, so that this empiric notion seems now to have acquired a scientific confirmation. The liver, more broadly speaking, has greatly to do with the whole metabolism of the body. In addition it is a large factor in body defense—an important fact not sufficiently emphasized. On the metabolic side it is intimately concerned with the last elaborations of the protein food substances—the amino acids—on their way to the tissue cells. From the carbohydrates it elaborates glycogen which becomes

stored-up energy. Finally it furnishes bile, a part of the function of which is to split up the hydrocarbons and prepare them for absorption and assimilation.

Its *defense function* consists in straining many noxious substances out of the blood, such as bacteria, protozoa and the toxic products of imperfect tissue oxidation,—a function so important we might well make it one of our fads. In a word, the liver, unlike any other, is equally important as an organ of secretion and of excretion; this is a concomitance of its unique relation to the circulatory system—a relation which should always be insisted upon. Its proper nutrition (at any rate of its parenchyma) is not derived from the general circulation as in the case of all other organs, but is derived directly from the portal vein. In the foetus this arrangement results in a great preponderance of hepatic growth, so that the fetal liver is large, out of all proportion to the other units of the organism.

Which of the liver's elaborations are secretions and which excretions? Physiologists are not clear on this point, particularly in the case of bile. Bile is quite probably both: secretion, represented by the bile salts; while excretion is represented by the bile pigments, salts of iron, copper and magnesium, neutral fats, nucleo-proteins, phosphatides and cholesterol. Bilirubin and cholesterol are the two excretion products of special note in this connection, and furnish the keynote to this paper. Bilirubin is formed originally in the spleen through disintegration of the red blood corpuscles and the splitting-up of the hematin. It is transported to the liver and eliminated with the bile. It undergoes some further change in the intestine; some of it forming *urobilin*, a part of which normally is reabsorbed. If the liver be overtaxed, urobilin makes its appearance in the urine in undue amounts. Blocking of its excretory ducts results most quickly in impaired function. Again, if the bile flowing through the biliary ducts be acted upon by certain bacteria, one of the immediate results of such bacterial action is the formation of an excess of urobilin which, of course, must be eliminated by the kidneys. The practical point is this:

*Read before the Section on Medicine of the Indiana State Medical Association at the Indianapolis session, September, 1921.

That the presence of an excess of urobilin in the urine is not only an index of impaired liver function but is also a strong indication of infection in the biliary ducts.

Cholesterol or cholesterin has been the subject of much recent investigation. First discovered in the bile, as its name indicates, it was supposed to be secreted by the mucosa of the gall bladder. It is a carbon-hydrogen-oxygen compound, a monatomic alcohol, a primary cell constituent and is doubtless a product of protein metabolism. Luden, of the Mayo Clinic, has made a long series of experiments to determine its importance in the economy and seems to have established a definite relationship between diet, blood cholesterol and the lymphoid defense. It is indicated, for example, that an excess of food rich in cholesterin, as the yolk of eggs, increases the cholesterol content of the blood but decreases the activity of the lymphocytes.

Now cholesterol is an excretion product in the bile and is held in solution by the bile salts and soaps. This solvent quality of the bile is reduced by changes in its mucin content induced by bacterial attack on the mucosa. With this result, viz., that the cholesterol is precipitated and a coagulum is formed containing cholesterin, mucous and bacteria, and, in some instances, bile pigments, calcium and magnesium salts. This is the genesis of gall stones, a complex of faulty metabolism and bacterial action. These reactions may take place in any part of the biliary tract, though of course most commonly in the gall bladder.

The point we are driving at is this—that *biliary infection is antecedent to cholelithiasis*. From this point of view gall stones are mere accidents in an important pathologic process. They are by-products of bacterial action in the bile ducts; in other words, they occur in some cases of infective cholangitis. And if they occur more frequently in the gall bladder it is only because the gall bladder furnishes the conditions most favorable for bacterial growth.

Now the subject of gall stones has held the fancy of the surgeon since the time of Bobbs and the surgeon has dominated this field. The internist did not give it up, however, without a struggle. As late as 1890 we find one of the Professors of Medicine in the University College of London, advocating the diagnosis of gall stones by sounding with a trocar; and their removal, by manipulation of the abdominal wall. But surgery in the course of time has gone to seed on the question of gall stones, and now the situation is reversed. Without further argument we say simply that for a time at least we are going to relegate gall stones and to think in terms of cholesterinaemia and

cholangitis, perhaps, even to the extent of developing a fad.

What bacteria are concerned in cholangitis and how do they gain an entrance to the bile ducts? First and foremost are those of the colon group,—the *communis coli*, the typhoid, the paratyphoid and related organisms. It might be expected, a priori, that these bacteria would be at home in a bile content since their habitat is the colon. Normally, but not constantly, they are found also in the duodenum and the ampulla of Vater. Gastro-duodenal catarrhs furnish favorable conditions for their invasion of the common duct and thence they spread to the radicals of the biliary system. With less frequency they are carried to the liver by the portal vein and under certain conditions of lowered resistance filter through it with the bile to gain eventually a foothold in the mucous lining of the bile tracts. In other cases, perhaps, their approach is by lymphatic paths. These bacilli are the most frequent cause of the milder types of cholangitis and are the most important factor in cholesterol precipitation and so of stone formation.

The *staphylococcus* does not seem of great importance in the etiology of biliary infections. It is more easily destroyed by the liver perhaps, or if it is of a virulent type, it is more likely to form small emboli and thus give rise to abscess formations in the liver substance.

The *pneumococcus* does not seem capable of living in bile.

It is the *streptococcus* that gives us the most concern in this epoch. It seems that since the great gripe epidemic of the late eighties, the activities of the streptococcus have almost changed the character of infective disease. The gripe organism and the streptococcus are probably commensal or symbiotic, with their first predilection for the lymphoid tissues of which the tonsil and the appendix (especially in the young) are chiefly composed. From these coigns of vantage they sally forth for attack upon other tissues. Thus the tonsil may be the most frequent source of the infection which is such a large factor in gastric or duodenal ulcer, while the appendix, probably, more often infects the hepatic area. These infections frequently constitute in themselves a vicious circle—inflicting and reinfecting—so that one who seeks to trace cause and effect loses himself in a bewildering maze.

The acute forms of streptococcus infection in the bile tracts produce the edemas and the gangrenes that present the most urgent symptoms. The more chronic forms give rise to fibrosis with a long chain of evil consequences—obliteration of the gall bladder or the ducts, distortions, changes in relation of the pylorus, etc., by reason of adhesions: and as secondary sequelae, serious disturbances of function in

the stomach, duodenum, colon and pancreas, not to speak of the multiplicity of remoter complications. And at any time these cocci may take on a hemolytic form. Many cases of supposed pernicious anemia or hematogenous jaundice are at bottom streptococcic infections in the biliary tract. In many such cases a tarry bile will be found in the gall bladder. Cultures from the bile may be negative but taken from the mucosa will be positive. In the milder types of infection the progress of the disease may be quite insidious. The most serious change may take place without the patient's suspecting. Hydrops of the gall bladder is a single example of such change.

The practical application of these observations is that it is imposed upon us to associate the idea of slight infective tissue change in the bile passages with functional change; to reconstruct our notions of all that the old term "biliaryness" connotes; to devise a more alert symptomatology to the end that we may anticipate and prevent these serious surgical conditions. For in these cases surgery can never secure a complete and permanent restoration of function—and these conditions are largely preventable. Prophylaxis, then, constitutes the first line of defense, the underlying principles of which can be, at this time, only indirectly suggested in calling to mind the several factors that predispose to biliary infection. These predisposing factors are: (1) Errors of diet—those which excite gastro-duodenal congestion, those which afford a preponderance of a class of food substances—whether it be excess of proteid and cholesterol forming foods or an excess of fats, or those which keep the physiologic function at a constant high pitch. Diet in its relation to biliary furnishes a large field for further clinical and laboratory experiment. (2) Pregnancy, which predisposes to biliary infection in several ways, bio-chemically and mechanically. In this connection we cite, for example, only one significant fact: In pregnancy the blood cholesterol is always greatly increased. (3) Foci of infection, a factor which might be evaluated in detail without end.

Diagnosis. With these known predispositions to suggest, and certain well defined groups of symptoms to point the way, one should seldom fail to reach a correct conclusion as to the presence and the nature of a biliary infection. Important special symptoms are referable to the brain, the stomach, the bowel, pains direct and referred, the skin changes, and so on. We spoke of "biliaryness" which is a term not to be laughed at, for it suggests a definite clinical picture,—headache, impaired cerebration, gastric disturbance, muscular debility, slow pulse, lowered blood pressure, etc.—which are doubtless the expression of choline poisoning. Now if to these manifestations of

functional disturbance we add the findings of persistent and patient examinations of the blood and excreta, we will seldom go far astray in the diagnosis of biliary infection even in its primary forms.

Primary changes in the ducts due to infection. There is a special reason why primary inflammations in the bile ducts—these earliest forms of cholangitis—have attracted comparatively little attention. The explanation lies in the fact that they are not apparent at necropsies,—the edemas and congestions having disappeared post mortem. The earlier tissue changes in the bile ducts due to infection, even in life, are not always apparent to the most practiced operating surgeon.

McCarty, of the Mayo Clinic, has recently described the microscopic changes and the order in which they probably occur. (1) Congestion and edema of the villi which are sometimes cystic. (2) Lymphocytic infiltration involving, gradually, the mucosa, the submucosa, the muscularis and subserosa. (3) Fibrosis involving all these layers. (4) The presence of large spheroidal cells filled with finely granular lipoid substances in the mucosa and submucosa. It is emphasized that these changes are not limited to the gall bladder and extrahepatic ducts, but are found in the ducts within the liver as well. These findings have extreme clinical significance and are worthy an hour's elaboration; the gross pathological changes, on the other hand, are so well known as to require no description.

Treatment of Biliary Infections. The treatment of biliary infections should first of all be prophylactic, the details of which are connotated in the enumeration of the predisposing factors which have been referred to. If prophylaxis has been lacking or ineffectual and infection is well developed, there is only one treatment of any avail, and that is *drainage*. The drainage may be *medical* or *surgical*.

In the acute catarrhal forms of cholangitis, medical drainage may be efficient and sufficient. By this is meant that measures are instituted to reduce the gastro-duodenal edema in order that the orifice of the common duct may regain its patency and a free flow of bile be established. To this end the digestive tract is emptied completely and kept so, in the meantime supporting the patient by rectal enemata—mostly saline.

In some cases the duodenal tube may be employed with the instillation of magnesium sulphate. Other adjuncts are useful insofar as they promote the one end, viz., to secure the free flow of bile. But medical drainage may be obviously a "pis aller"—going from bad to worse.

In the acute cases with indications of complete obstruction or of sepsis, and in the

chronic cases, it is indicated to drain surgically without delay. Ordinarily it is sufficient to drain through the gall bladder although in many cases it is necessary to place the drainage tube in the common duct or even extend it to a hepatic duct.

If a tube is left in the gall bladder only, it is imperative to be assured that the cystic duct is patent. If the common duct is permanently obstructed, plastic work will be necessitated, securing permanent drainage by anastomosis of the duct and duodenum, or of the gall bladder and duodenum, or even reconstructing the duct over a rubber tube.

External drainage should be encouraged until the bile is quite sterile and until the evidence that it escapes normally into the intestine is complete. The technique of drainage is too well established to require discussion—the main points being to operate in such manner as not to spread infection and to prevent adhesions. In cases requiring simple tubal drainage the gall bladder should not be attached to the abdominal wall as was formerly the custom but it should be walled off from adjacent structures with rubber tissue. If, however, the mucosa is seriously impaired it will be better oftentimes to fix the gall bladder in the abdominal opening and drain with gauze. The chief difference of opinion at this time is as to the relative merits of cholecystotomy and cholecystectomy.

My own opinion is that the gall bladder should never be removed except for one cause, viz., permanent loss of function. In acute cases its function is permanently destroyed if its walls are gangrenous or edematous and thickened; in the chronic cases, if it is sclerosed. The problem is not so simple as that, of course, but it is not possible at this time to consider the functions of the gall bladder and the arguments pro and con in re removal. But this is certain, that the dictum that the gall bladder should be treated like the appendix has done incalculable harm, for it has encouraged the tyro who removes an appendix with passable grace to regard biliary surgery as a "get in quick, get out quick" affair, with its chief end to secure another surgical scalp in the shape of a gall bladder to hang out to air as an added proof of surgical prowess—a technique as erroneous as it is vicious. The immediate results, it is true, may be excellent but what happens more remotely—well, that is on the knees of the gods. Whatever the serious or even lamentable eventualities, the operator may complacently fold his arms and say: "There is nothing more to be done; I removed the gall bladder." The traumatism done to the hepatic or common ducts, or their wholly inadequate drainage, does not appear in the record. There is no surgery that calls for a higher class of

surgical judgment, and no technique is in any degree efficient which does not include a thorough examination of the liver and its adnexa, the stomach, the adjacent portions of bowel and the pancreas.

And whatever one's technical skill and surgical judgment his work is not permanently effective unless supplemented by an *after treatment* which may need to extend over months or years, the purpose of which is to correct the patient's predispositions and the recurrence of his biliary infection in more aggravated forms.

I should like to restate my thesis in even simpler terms:

(1) The importance of hepatic function is being overlooked both in diagnosis and therapy.

(2) The question of gall stones and their surgical treatment has overshadowed allied problems to a serious extent.

(3) Gall stones are to be regarded merely as by-products and not the inevitable concomitants of cholangitis—of infective inflammation of the biliary passages.

(4) Our attention should be directed to the bacterial agencies of cholangitis, their foci and mode of attack.

(5) The most common infective agents are the colon bacilli and the streptococcus, each of which is capable of producing a syndrome: The colon bacilli more related to catarrhal processes with adventitious choiellithiasis; while the streptococci give rise to the serious acute inflammations and in chronic forms the slowly destructive and sclerotic changes.

(6) The sole principle of surgical treatment of cholangitis is drainage, which includes removal of mechanical obstruction.

(7) Removal of the gall bladder should not be made a routine part of such drainage.

(8) Surgery of the biliary tracts calls for the highest degree of surgical judgment independent of technical skill.

DISCUSSION

DR. W. D. ASBURY (Terre Haute): It appears to me that the subject of biliary infection is one of the most important things with which we have to deal. It has happened often in the past that the surgeon has performed a cholecystectomy or a cholecystotomy and still has some of the same condition remaining, just as the removal of a gastric ulcer does not always remove the source of trouble. A study of the gall bladder and liver functions is a particularly interesting one from its embryological, physiological and anatomical standpoints.

To have a clear understanding of the stomach, the liver, the duodenum and the pancreas we should know of their embryology, anatomy

and physiology. These organs are all embryologically very closely related and for this reason it is very difficult to differentiate certain diseased processes of these organs. They all receive their nerve supply through the splanchnic nerve. The peculiarly nice adjustment of the flow of bile in man has been brought about through the sphincter of Oddi and the ampulla of Vater, whereby when bile is needed the flow can be regulated according to gastric needs and the remainder can be stored until further needed. This continuous flow of bile in lower animals has been converted in man to a dis-continuous flow. If we leave out these fundamental facts we have left out the most important consideration. All medical treatment following these gall bladder operations should be rendered in the light of these above facts.

The subject of cholesterolemia of the blood is especially important. Urinalyses are often made with the thought that one is analyzing things from the kidneys. Perhaps even the sugar and other excretory products found in the urine should be considered an output of the liver as well as the kidneys. When a child does not wish to eat the yolk of an egg, he probably knows more about it than the doctor who recommended it, for it increases the cholesterol of his blood. All treatment directed toward these biliary infections should be done with a clear understanding of the above facts.

DR. WILLIAM H. FOREMAN (Indianapolis): I wish to say that the seeming infections of the gall bladder are often not infections of the gall bladder. We have instances where the gall bladder has been drained and even where cholecystectomy has been performed, with the patient having the same symptoms that he had before, so we cannot attribute these symptoms to the gall bladder infection. These conditions may be due to stasis in the colon. As we know, there are no glandular secretions in the colon to prevent fermentation or decomposition of the food, so we have fermentation and decomposition occurring in the colon when there is retention, and which may give us the symptoms of "biliousness". So I believe many of these symptoms of so-called biliousness are not due to gall bladder but to colon conditions. However, it is my custom to make a blood count in such cases and if the blood does not show an increased leukocytosis I question whether we have a gall bladder infection. A leukocytosis very seldom occurs from fermentative changes in the colon but is usually present in acute gall bladder infections. I think a very careful blood count is necessary to know whether the patient should have the gall bladder drained, or whether his colon should be looked into and the condition corrected there.

DR. GEORGE W. MCCASKEY (Fort Wayne): The author rather incidentally mentioned studying the bile passages by the use of the duodenal tube according to the Meltzer-Lyon method. I have been very much interested in this subject and have made about one hundred observations on about forty patients. The contents of the gall bladder cannot be uniformly obtained and I prefer my clinical assistants to consider bile passage drainage instead of specifically gall bladder drainage which may or may not have been accomplished. It seems to be quite rational to procure the bile if we can, segregate that derived from different parts of the biliary tract if possible, and study it in every possible way, just the same as you would secretions from the stomach or urinary tract. I regard it as an extremely important addition to our methods, although its exact scope and limitations have not been determined. I will add, however, that in many instances I have been shown the segregated bile specimens, and have not the slightest doubt that the gall bladder has been at least partially emptied, and that in such cases it can be separately studied. In a number of cases we have been able to definitely prove the existence of pus, pathogenic germs, etc.

Although speaking with considerable reserve I will say that in at least a few cases very definite therapeutic results were apparently obtained.

DR. GEORGE W. SPOHN (Elkhart): The second discussant stated that in some instances we find a colonic infection. He did not give us the differential diagnosis as to when we have a colon and when a biliary infection, and I would also like to know what the treatment is if it is a colon infection.

DR. WILLIAM H. FOREMAN (Indianapolis): (Replying to Dr. Spohn). It would take a long time to answer Dr. Spohn's questions. One point I mentioned in the differential diagnosis is that if the blood count does not show a leukocytosis it is pretty evident we have no acute biliary infection. Of course, I realize we may have a chronic, low grade biliary infection and no change in the blood count. We have cases that have been operated with the gall bladder drained and sometimes the biliary symptoms persist just as before. That is not saying anything against surgery for I thoroughly believe in drainage of the gall bladder and cholecystectomy when indicated, but I say that we have cases in which this has been done and the same symptoms obtain, and then we must think of something else and usually in these cases the difficulty lies in the colon. I could answer the question as to treatment if I had time, for they can be treated and absolutely cleared up if it is a colon condition, but I have not the time to go into this now.

DIAGNOSTIC USES OF THE DUODENAL TUBE

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During the last decade the ever-widening clinical application of the duodenal tube has greatly increased our knowledge of gastro-intestinal disease by rendering the clinical data more available. To this has rather recently been added the diseases of the biliary apparatus. Though primarily intended for duodenal examination, it has, in my work, and I think in that of most other clinicians, entirely superseded the Ewald tube in gastric analysis. Its advantages are obvious. Perhaps the greatest of these is that because of its small size, softness and flexibility of construction, it can be tolerated for hours, or even days, permitting of many and frequent observations of gastro-intestinal chemistry, or even repeated therapeutic procedures.

Fractional Gastric Analysis. The old method of removing the test meal in one hour, and classifying the case according to the findings at that time, was based upon the false assumption that the crest of the acid secretion would then be reached. It would not have been practical in many cases to introduce the cumbersome Ewald tube more than once, and it therefore became necessary to select some uniform time for the procedure. We now know, however, that there are wide variations in the time of maximum secretions.

In the following table the findings in ten selected cases are given in relation to the free HCl content, during gastric digestion. The figures corresponding to a given case at a certain time represent "degrees" of HCl acidity, the standard being that 100 degrees represents deci-normal HCl, which is equal to about .36 percent.

HCl IN FRACTIONAL STUDIES

Case No.	1 hr.	1 1/4 hr.	1 1/2 hr.	1 3/4 hr.	2 hrs.
1	36		35		0
2	0		0		15
3	0		12.5	15	
4	10		10		24
5	23	57	64		
6		28	50	76	52
7	20	31	40		
8		12	36	34	46
9		90	50	50	
10	0	0	0	0	

A glance at these cases will show how entirely unreliable would be any conclusion as to maximum secretions based on an analysis made at the expiration of one hour.

The curve of secretions in case "1" apparently conforms fairly well to the older work, the maximum free HCl contents probably being reached in about one hour, and disappearing in two hours. Cases "2" and "3" would have

been classed as achlorhydrias, whereas they are really hypochlorhydrias. Cases "5" and "6", on a one-hour basis, are quite within normal range. As a matter of fact they are both definite hyperchlorhydrias. Case "7" begins fairly low, but ends rather high. Case "10" begins the same as "2" and "3", but remains consistently achlorhydric throughout, and case "9" is a definite hyperchlorhydria, with the maximum secretions, during the period of observations, at 1 1/4 hours.

There are of course other phases of gastric secretions, aside from the free HCl content, which can be "fractionally" studied in this way, but this shows better perhaps than any other single phase, the pathologic aspects of gastric secretions. It is probably more often perverted, and also, more than any other, offers valuable therapeutic suggestions.

These observations, taken more or less at random from my clinical records, are not designed so much to throw light on gastric secretions as to indicate the clinical applications of the duodenal tube in the study of gastric diseases.

We have analyzed two hundred recent consecutive cases, simply to determine in what proportion of cases the HCl secretion increases or diminishes after the first observation made at one or one and one-quarter hours.

Several interesting viewpoints were obtained in this analysis. Excluding the achlorhydrias, of which there were forty-six, or twenty-three percent, one hundred and sixteen, or about 75.3 percent, of the remaining one hundred and fifty-four cases showed an increased HCl content subsequent to the first observation. Again excluding the achlorhydrias, thirty-eight cases, or 24.7 percent, showed a greater HCl content at the first than at subsequent observations. Another interesting point is that seventeen cases would have been classified as achlorhydrias on the basis of the one-hour observation, whereas they all subsequently showed free HCl varying from 20 degrees up to 48 (1 case) and 55 (1 case).

The Study of the Fasting Gastric Contents. If the capsule of the tube is introduced into the fasting stomach, its contents can be studied chemically and microscopically. Information of decisive value may thus often be obtained. For instance the quantity of the fasting secretions may be very large (100 to 200 c.c.) or very small (1 to 3 c.c.). Normally I would say there is from 5 to 15 c.c. or possibly much more. The failure to get any is not necessarily pathologic. Chemically it may vary from an "achlorhydria" to an extreme "hyperchlorhydria", or give both the benzidine and guaiac reaction for occult blood. Microscopically, blood, pus and micro-organisms may be recognized, and will have the usual significance.

Duodenal Secretions. Having studied the fasting gastric contents, the stomach is washed out and the tube allowed to remain in the situ. The patient then lies down on the right side and waits for the tube to pass through into the duodenum. This is the most unsatisfactory part of the entire procedure. Ordinarily it passes through in twenty to forty minutes, although it occasionally takes much longer. The determination of the location in the duodenum is not so simple as was at first supposed. Bile regurgitated into the stomach, an occurrence not at all rare, may easily give the false impression that the bulb has passed the pylorus. The reaction cannot be depended on because with regurgitated bile the gastric contents may vary from neutral or faintly alkaline to strongly acid. Substantially the same reactions may occur in the duodenum when acid secretions are poured into it from the stomach. We have found that the fluoroscope offers the only prompt, unequivocal proof, not only of the passage of the tube, which gives a peculiar, unmistakable curve to the latter, but also of its exact position in the duodenum. If, for instance, it has passed too far, it can easily be drawn back to the desired point under fluoroscopic observations.

The fasting duodenum always contains a certain amount of fluid, which may be a mixture of gastric and duodenal secretions, perhaps together with both pancreatic and biliary secretions. This fluid is aspirated and submitted to microscopic and chemical study. The microscopic findings are compared with those obtained from the gastric contents, revealing any additions which may have been made in the way of cells or bacteria. Chemically its reaction and also the degree of acidity or alkalinity is determined, although the latter will depend largely upon the character and quantity of the gastric secretions which have found their way into the duodenum. The enzymes contained in the duodenal secretions and mainly derived from the pancreas are carefully studied. These digestive enzymes are first the proteolytic, second the amylolytic and third the lypolytic. The stomach furnishes the proteolytic enzyme for gastric digestion and may contain the amylolytic enzymes derived from the ptyalin of the salivary glands. The activity of these enzymes contained in the duodenal contents has an important bearing on intestinal digestion and is tested out in an incubator, respectively, by egg albumen, starch and milk fat. Pancreatic disease, or at least impairment of the pancreatic function, can thus be determined and is obviously of the highest diagnostic importance.

Bile Drainage. We have remaining for clinical study with the aid of the duodenal tube, the bulb of which is now in the duodenum, the secretions of the biliary apparatus—a most

important and rather recent addition to our clinical methods of research. Whether or not the bile passages are the site of infections is a clinical problem which could not heretofore have been attacked by any method feasible for ordinary clinical study. However, with the bulb of the duodenal tube close to the papilla of Vater, if bile is freely discharged from the common duct into the duodenum it can be readily aspirated for clinical study. It can then be examined microscopically for cells and micro-organisms after the duodenal mucosa has been thoroughly cleansed in order to get rid, so far as possible, of any pre-existing material.

In order to secure bile in any considerable quantity, some sort of stimulation must be applied to the duodenal mucosa, without which secretion is either slight or absent. Normally this stimulus is supplied by the acid chyme which is expelled from the stomach when it has been prepared for intestinal digestion. This, of course, heralds the physiological demand of intestinal digestion for bile. In response to any such stimulation the activity of the liver cells is enormously increased, and large quantities of bile are poured directly into the duodenum. At the same time without any reasonable doubt, cystic bile in varying quantities, physiologically altered by the highly complex gall bladder mucosa, is added to the freshly secreted bile, doubtless for some important chemico-physiological purpose.

This is what I have seen happen scores of times from artificial stimulations, the precise nature of which does not appear to be very important; at least substantially identical results can be obtained with different solutions. Because of Meltzer's experimental observations with magnesium sulphate, later taken up clinically by Lyon, a 30 percent solution of this salt is generally used. Within a few minutes after the instillation of 30 to 50 c.c. of this solution, there occurs a free flow of golden yellow colored bile. There is usually 10 to 20 c.c. of this bile and then there follows from 30 to 100 c.c. or more dark colored bile, obtained in whole or in part from the gall bladder, this again to be followed by another flow of golden yellow bile, undoubtedly freshly derived directly from the liver cells. To question the clinical value of the chemical and microscopic study of these secretions would be tantamount to questioning the value of similar studies of the urine. The detailed discussion of the various findings would far exceed the intended scope of this paper, which is limited to a general consideration of the diagnostic uses of the duodenal tube. The writer has elsewhere* discussed these questions at some length with a considerable review of the literature. It may, however, be remarked

(*) "Non-Surgical Drainage of the Bile Passages," awaiting publication in the New York Medical Journal.

here in passing that the microscopical and cultural evidences of infections which may be thus obtained are of prime importance. It is quite possible to recognize these infections in the pre-surgical stage, and perhaps postpone or even entirely prevent the evolution of the latter. This would of course imply the possible prevention of gall stones—a late phenomenon of infection—and also gall bladder empyema. These are admittedly "consummations devoutly to be wished", and I believe in a certain proportion of cases entirely possible.

But perhaps of even greater importance is the bearing which these diagnostic studies, with their potential therapeutic applications, may possibly have upon the different hepatic pathologies classified under the conglomerate term, cirrhoses. No less noted a pathologist than Adami* believes that chronic infections, perhaps biliary, perhaps hematogenous, or perhaps both, play a conspicuous etiologic role in the development of these conditions. It would seem that the earliest possible recognition of these etiological factors might be found in the infections, the recognition of which is thus made possible by the duodenal tube.

Functional Liver Test. In 1913 Rountree, Hurwitz and Bloomfield* offered a functional liver test which consisted of the intravenous injections of a measured quantity of phenoltetrachlorphthaline. The test as applied to man included the collection of feces over a period of forty-eight hours and the quantity of the dye determined by chemical and colorimetric methods. This method, because of evident drawbacks, was not clinically practical, and I, for one, never had the courage to attempt it in spite of the fact that along with all other clinicians I felt the pressing need of clinical data bearing on liver function.

Recently Aaron, Beck and Schneider† have proposed a modification of this test, in which the time of the appearance of the dye in the secreted bile is taken as the index of the function of the liver. As a matter of fact, this is quite analogous to the time of appearance of the phenolsulphonphthaline in the renal function test, entirely omitting all quantitative estimations, because as these authors observe, of the impossibility of determining the quantity of the dye which would inevitably escape down the intestinal tract. This method seemed to fit in so well with the methods we were already carrying

out by duodenal intubation that we decided to try it out, when indicated in such cases, which we are now doing. According to these investigators the normal range or time of the dye to appear, after intravenous injection, is from fourteen to twenty minutes. They conclude that when the dye does not appear in the aspirated duodenal contents until twenty minutes the delay is sufficient to cast suspicion on the liver function, and that delays until thirty minutes or longer are definitely pathologic.

Summary. As an illustration of the amount of information which can be obtained from a single introduction of the duodenal tube, the following technique has recently been carried out in a few selected cases: The tube is swallowed in the fasting condition; the fasting gastric contents aspirated for clinical study, after which the stomach is thoroughly lavaged with normal saline, with or without the use of antiseptics. The tube is then allowed to pass on into the duodenum, and its exact position determined by the fluoroscope. The fasting duodenal contents are then aspirated for clinical study after which the duodenum, like the stomach, is thoroughly lavaged. The magnesium sulphate solution, or other stimulant selected, is then instilled into the duodenum and the bile, the secretions of which have been in this way augmented, is secured for suitable clinical study. At any time after the bile begins to flow, 1 c.c. of a sterile solution, containing 50 milligrams phenoltetrachlorphthaline is injected intravenously, and observations made at one or two minute intervals until the characteristic color reaction is produced when the bile is dropped into a 40 percent NaOH solution. After completion of the bile drainage and liver function test, a gruel test meal, made of cream of wheat or other fine material, is administered, the patient being required to take the gruel slowly, a mouthful at a time, in an effort to obtain insalivation. The progress of duodenal digestion of this test meal can be studied for from 45 minutes to one hour, after which the tube is withdrawn into the stomach and the usual fractional study of gastric digestion carried out.

It is therefore possible, in a case in which it is desirable, by the procedure above indicated, with a single introduction of the duodenal tube to get—

- 1st. The fasting stomach contents;
- 2nd. The fasting duodenal contents;
- 3rd. The secretions of the pancreas;
- 4th. The secretions of the liver;
- 5th. Make the functional phenoltetrachlorphthaline liver test.
- 6th. Make a fractional gastric analysis with the gruel test meal.

(*) Adami, J. G., Sajous's *Anylit Cyclopedie of Pract. Med.*, 8th Ed., Vol. III, p. 401.

(**) Rountree, L. G.; Hurwitz, S. H., and Bloomfield, A. L.: An experimental and clinical study of the value of phenoltetrachlorphthaline and a test for hepatic function; *Bulletin Johns-Hopkins Hospital* 24: 327, 1913.

(†) Aaron, A. H., Beck, E. C., and Schneider, H. C.: Phenoltetrachlorphthaline test for liver function; *J. A. M. A.*, 77, 1631, Nov. 19, 1921.

STATE MEDICINE*

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There never was a time when there were so many individuals and such a multitude of organizations with peculiar ideas and theories for the salvation of mankind. We are in a transitional state, aggravated and accentuated by the reaction from the war. We suffer from the Great Unrest. It affects every individual, crops out in every community. It has led to numerous proposals to correct evils, real and imagined. The path of least resistance has usually been followed so that the burdens would be lifted from the individual to the community, from the community to a larger governmental unit, from the state to the federal government. The numerous impractical, unnecessary, costly and elaborate suggestions and devices are often passed unnoticed, except by those who are personally interested in their becoming operative. This is the day of the propagandist, the professional uplifter and the busy-body booster. Among the many things they have tried to accomplish is to tear down what is good in medicine and substitute a system of State Medicine. This term is indefinite, but it is generally accepted to mean that the practice of medicine should be under the control, direction or subsidy of the state or national government.

Within certain limits the state should control the practice of medicine. It is necessary that the state license its physicians. It is also necessary to provide for the care of the insane, tuberculous and others who suffer from incurable maladies. It is right that the state maintain public health departments. It is right that the state should demand safety devices for workingmen, traffic and building regulations. And, difficult as the problem is, I believe it is nevertheless right that the state should attempt to control alcohol and venereal diseases. All these problems are general and require governmental control and regulation.

The problems of clinical medicine are individualistic, for, communicable diseases excepted, treatment is given for the benefit of an individual and not of the public. It is not generally accepted that public health departments provide treatment of non-communicable diseases or relief from physical defects.

In this country the rule is that when a person becomes ill he summons the physician of his choice, whose services he may continue or dispense with. The compensation the physician receives is determined by him and his patient. In other words the practice of medicine is purely a private matter so far as the patient is concerned and he is independent. He is usually

able and willing to meet the necessary expenses incident to his illness and maintains his self-respect.

In order that we may study proposals for more economic and efficient care of the disabled, let us briefly consider the medical man from an economic standpoint. The increasing preliminary educational requirements, the added expense of medical training and the uncertain financial returns of medical practice have led to an actual decrease in the number of medical students and physicians who engage in private practice.

From 1904 to 1919 there was a decrease of medical students from 28,142 to 13,052, or a decrease of 53.6 percent, due chiefly to the fact that many medical colleges with low requirements were discontinued. Therefore, a number of prospective students not possessing the essential qualifications were unable to matriculate in the better schools. In passing, it may be pointed out that one reason for the existence of irregular medical cults is the fact that their devotees are able to assume the care of the sick and injured without the expense, effort or preliminary educational qualifications required of medical students, and the further fact that no matter how irregular or how incompetent they may be they are permitted to practice without interference of the state or the public.

There has been noticed the tendency in recent years for medical graduates and physicians who have engaged in practice independently to accept salaried positions with organizations of medical men or those requiring the services of physicians. There is, therefore, an actual reduction in the number of physicians who engage in independent practice. Also, equally noticeable is the tendency for trained nurses to accept employment with organizations. Attention has been called frequently to the inequality of distribution of physicians,—that is the abandonment of the rural districts for the more densely populated centers.

Then there is the development of specialism, the clinics, the diagnostic laboratories. Once more we see the drift away from the older order,—from the family physician and the individual physician. There is now more teamwork among physicians. This is manifested by recent attempts to standardize hospitals.

Medicine is in a transitional stage. From the standpoint of the patient are things going to be better or worse? From the standpoint of the profession, what is the outlook?

Every physician in private practice meets with three classes of patients, considered from their ability to pay for services rendered them. The first are the very poor who cannot help themselves. The second class are those who grade from the poor to the wealthy, those of the great middle class, from whom physicians chiefly derive their income. They are usually able to pay

(*) Read before the St. Joseph County Medical Society.

ordinary fees for services, except in cases where illness is long continued or accidents are very severe. The third class are the wealthy, from whom relatively larger fees may be obtained, but who in the aggregate contribute but a small part to the average physician's earnings.

It is frequently said that the poor and the wealthy may secure the best medical or surgical treatment and to a certain extent this is true. The poor are provided for in one way or another and the wealthy may command the services of anyone they desire. But this great middle class, the principal asset of the medical profession, the people who under ordinary circumstances desire competent treatment and who pay ordinary fees, do occasionally suffer from an injustice in our present system. It cannot be denied that there are extraordinary illnesses or accidents, with attendant economic losses, that at times prove most embarrassing.

Relief from these conditions is sought through charities, fraternal orders, poor relief laws, philanthropic organizations, voluntary insurance, mutual aid societies and the like. But the relief thus afforded is often but partial relief, for the financial returns to the disabled, when he is in need, are usually small and inadequate. The medical profession has not denied its duty towards the needy, and I doubt if anyone who is really in need suffers for want of competent medical attention.

Medicine as an art and as a science naturally undergoes evolution. There must of necessity be changes in methods of diagnosis and treatment to keep pace with scientific discoveries. And there must be adaptations and modifications in practice to meet ever-changing social conditions. Experience has shown that the medical profession has not lagged behind or hesitated to introduce anything which would aid in diagnosis or relieve suffering. Progressive physicians have been alert and studious, if not all leaders, at least capable of utilizing and applying new methods. The successful practitioner must always be a student and I submit the facts that medical publications have a large sale, that our postgraduate medical institutions are prosperous, and that our medical associations and societies are constantly diffusing knowledge, as evidence that the profession as a whole is endeavoring to keep informed and to improve itself at its own expense and effort for the benefit of the public.

Medicine has always been altruistic and now, as in times past, its devotees seek to meet changed social conditions. The problems of the sick and injured are within the province of the medical profession and not of the social reformers. If the history of medicine means anything it may not be amiss to suggest that physicians have and will continue to work out their problems, both scientific, and as far as possible, eco-

nomic. But it must be insisted that if medicine is to progress it must not be embarrassed by needless restrictions and interference.

State medicine, in its broadest sense, would mean that there would be developed for all the people government hospitals and medical departments corresponding to those existing for the army and navy. All the sick and wounded would be taken care of at government expense, whether suffering from communicable diseases or not. All physicians and other personnel would be agents of the government, state or national. No serious attempt has as yet been made to go this far, but there have been numerous attempts to obtain state medicine in indirect ways, as by the introduction of various bills, particularly those providing for what is commonly called compulsory health insurance.

This came to us as German propaganda before we entered the war. Almost without warning, bills to provide state health insurance appeared in twenty-two legislatures in 1917. These were introduced at the request of the American Association for Labor Legislation, an organization whose membership lists show but few employers, workers or physicians, the three groups immediately affected.

This is the ambitious program these reformers have proposed:

"Health insurance should be required for all employees, to be paid for by employers and employees in equal proportion. The state should pay all costs of state administration as in the case of workingmen's compensation acts and all costs of supervision of insurance carriers. The benefits to workers under health insurance should consist of:

1. Cash payment of a part of the wages of workers disabled by sickness.

2. Complete medical care for the worker, including hospital and home care and all surgical attendance and the cost of all medicines and appliances.

3. Adequate provision for rehabilitation, both physical and vocational, in cooperation with existing public departments and institutions.

4. Dental care.

5. Medical care for the wives and dependents of the workers if the same can be done constitutionally, and a burial benefit for the worker."

These bills were introduced upon the plea that "there is no other measure now before the public which equals the power of health insurance towards social regeneration". In spite of nation-wide propaganda, not a single bill has been enacted into law. It may therefore seem out of place to discuss something which apparently has been settled. But there is no assurance that similar bills will not be introduced in the future because of the encouragement offered by the passage of the Shepard-Towner

bill, which provides national and state aid for expectant mothers and is intimately related to the bill for compulsory health insurance.

What are the objects of state health insurance? Primarily it would appear that its proponents have in mind equalizing or eliminating economic losses due to illness. It must be first shown that there is genuine need for such aid. It has not been proved that the economic loss from sickness is so great, embarrassing or urgent that an elaborate and costly system of state aid is required to offset it. Every physician knows that the major portion of his time is spent in caring for patients whose illness is short lived and does not incapacitate for work for many days.

An argument is that "a national emergency exists as regards the adequate health protection of our people". This assertion is based upon the findings of the draft boards, that one-third of the men examined were declined for military service. These findings are frequently quoted to prove the physical deterioration of the American people. It must be remembered that they were based upon antiquated military standards which were very strict with regard to certain physical defects, and which made a man undesirable for military duty but in no way affected his health or ability to earn a living. When you figure up the draft boards' findings from the standpoint of a health survey they will be toned down considerably when it is learned just what constituted physical defects, according to military standards.

Another argument is that such a system will "make complete medical care available to all wage earners, their wives and children and protect all wage-earners, including those who would otherwise lack the means or foresight to insure". In other words, the workingman will have to take no heed of the morrow, the state will care for him if he gets sick.

It is also asserted that health insurance would "tend to reduce lost time and labor turnover due to prolonged cases of sickness". Just the reverse has been found to be the case in Germany and England where malingering is an ever-growing blight on the workingman. It is believed that the cost would represent four percent of wages paid workingmen, based upon Germany's experience. There is no available information on this subject because German reports do not permit one to determine what percentage of the wages is used. But lately, in England, the rising cost of state insurance has led to decreasing physicians' fees rather than raising the workingmen's contributions. Reliable American students of this proposal estimate the percentage would be more nearly fifteen percent of the employee's wage.

Still another ideal of the reformers is the "hope to reduce the incidence of tuberculosis,

"feeble mindedness and venereal disease"—certainly most commendable but no information is forthcoming as to the methods to be employed in bringing about the desired reduction.

Whatever arguments may be advanced for compulsory health insurance we cannot lose sight of the origin of the system in Germany. It was political subterfuge. It was not an honest attempt to better the workingman but to control him. It was Bismarck who engineered the plan, which has as its object not health promotion but political domination. It was his solution of the problem of the growing socialistic movement in Germany. It was his means to destroy the Social Democratic Party, and this system has been the most drastic, burdensome and unnecessary means of social control conceivable. It has failed to check the spirit of socialism in Germany. It has failed to protect the health of the German workingman.

In 1911 Lloyd George succeeded in introducing health insurance into England. He has said: "It was from Germany that we who were privileged to be associated with the application of the principle to the United Kingdom found our first inspiration, and it is with her experience before us that we feel confident of the future." Mr. Lloyd George had had no experience which qualified him as an expert on public health and was easily misled and gave his endorsement of a measure which has proved as unsatisfactory in England as it has in Germany.

Compulsory health insurance is unjust to the public, to the workingman, to the employer and to the medical profession.

State health insurance is intended to apply only to workingmen, and, if it has its advantages, they are the advantages of a class as opposed to the public at large. It would not insure the health or care for the majority of the population. It would have no effect in preventing illness or accident. And, ultimately, the public would pay the bills, for the employer to cover his share of the expense would add it to the price of his products. It would, therefore, simply mean a shifting of funds, to which must be added the cost of the shifting, in the way of administrative expenses, that is increased taxes.

Compulsory health insurance is unfair to the workingman because it would compel him to become dependent, to lose his identity and become a card-indexed unit. It will be forced upon him, because he has not asked for it. Labor leaders have repeatedly expressed themselves against the measure. It will destroy the worker's domestic privacy, his self-reliance and self-respect, for he will be subjected to official and officious scrutiny of administrative officers. He will be deprived of five, ten or possibly fifteen percent of his earnings to create his share

of the funds necessary to carry on this insurance. He has no control of these funds. That is the state's business. The workingman must understand that only fifty percent of them will be returned to workers, in the form of cash payments, medical services and funeral benefits, while the remainder will be taken from his control to provide for reserve and guarantee against the days of epidemics and catastrophes, but actually made available, under the bills proposed, for the creation of an army of lecturers, social surveyors, field inspectors and other administrative officers. These funds, running into big money, will trickle back to the workingman in tiny rivulets. Aside from financial considerations, the workingman must understand that while apparently he is getting something for nothing or for very little, he will be the one who most suffers. Experience has shown that medical men employed as insurance physicians will not and cannot do them justice because they are burdened by red-tape, limited as to the kind of medicines and surgical appliances which may be used, and overworked by the needless as well as the necessary demands upon their time.

This system is an injustice to the employer inasmuch as he is made responsible for forty percent of the cost of medical care of his employees but has absolutely no control over them in the matter of preventing illness. He cannot require periodic physical examinations nor insist upon corrective surgical operations when they become the controlling factor in health. He cannot enforce cleanliness nor any of the measures to prevent venereal disease. There is a difference between the employer's relation to his employees regarding accident. He is responsible for accidental injuries, not due to the employee's carelessness. It is necessary for him to reduce the accident hazards in his plant and to protect his employees in every way possible. He has some control over his employees, while they are at work. And, there is usually a definite relationship between an accident and resultant disability and the employer is rightly charged with the care and compensation of his injured employees. With the exception of occupational diseases, the employer is not responsible for the illness of his employees and their families, and cannot in justice be compelled to contribute to the support of compulsory health insurance.

Finally, compulsory health insurance is an injustice to the medical profession. It is all too clear what it would mean to the physicians of this state if our legislature should enact a law of this kind. What is the purpose of such a law? Apparently, among other things, to secure medical attention, and this includes dental attention, at reduced cost. If the cost is reduced, who makes the reduction? There is but

one answer, the physicians and dentists, and perhaps the law would be interpreted to include the nurses. In England it applies to druggists as well, for there is a list of approved drugs, chosen mainly from the standpoint of cost. If physicians prescribe or druggists dispense drugs not approved they are liable to prosecution. In America it would be difficult to arbitrarily fix the price of drugs, surgical supplies or hospital service and it is apparent that the chief means by which the cost of medical care would be reduced must be in the return for professional services. But, if it can be shown that the public would be benefited, then the medical profession has no right to object to it. The principle, "The greatest good to the greatest number" must prevail. The burden of proof rests upon the proponents of health insurance. Neither the experience of Germany nor England in the operation of state insurance indicates that it is desirable or necessary to adopt it in America.

The Shepard-Towner bill was recently passed and signed by the President. This is a law which bears the trade-mark of the professional reformers. It provides for assistance to the states to help women by prenatal and post-natal care. The federal government is to give from its treasury to any state which accepts its provisions and allots a like sum of money for its purposes: the money to be spent by the state boards to be created, under the direction of the federal board, created by the law. The federal board has but one physician, the Surgeon General of the Public Health Service, as a member, a physician whose special domain is preventive medicine, not obstetrics or pediatrics. The other members are the Chief of the Children's Bureau and the United States Commissioner of Education, both laymen.

The law provides for an initial expenditure of \$1,480,000 by the United States government. The money is to be spent to promote the care of and provide instruction for women in maternity. It is not the intention to provide for actual care of women in confinement. None of the welfare workers will lose an hour's sleep on account of a delivery nor even present the newborn baby with a diaper. That is not the purpose of the law. It is specifically stated that no money shall be spent to build or rent any structure for any purpose nor pay any pension, gratuity or stipend to any mother. The purpose of the law is to provide instruction and if the several states accept its provisions it will be costly instruction, several million dollars worth, in fact. The money will be spent to employ welfare workers. And what will they tell the mothers? That will be determined by the lay board at Washington!

Going back a little into the history of the

bill, it may be recalled that this law is a propaganda law. It was urged by the women's journals. For months these publications carried stories of cases where mothers had been neglected, published statistics showing that this country stands seventeenth in regard to the mortality following confinement, showed that 300,000 babies die before they are a year old and in every way imaginable roused the sympathy and support of their readers. In other words these publications, aided and assisted by numerous women's organizations, created an enormous lobby and kept up a vigorous campaign to secure the passage of this law.

The bill is the work of professional propagandists and from a political standpoint a dangerous experiment. From a medical standpoint it is totally unnecessary, inasmuch as there are now ways and means of securing this instruction and state assistance is not imperative. And further, it will never be possible to rid pregnancy and confinement of some of its dangers and risks. It so happens that the wives of physicians, that trained nurses and women physicians who become mothers suffer from obstetrical accidents just the same as other women. There is no known way of making pregnancy and confinement one hundred percent safe. It is absolutely impossible to materially reduce mortality by a course of instruction. If here and there a woman needs assistance during pregnancy or needs to be supplied with expert care during confinement, then by all means let that be supplied by the community, not by the state or federal government.

The law contemplates needless interference in matters which are private and sacred and not proper for official investigation or inquiry. The proponents of this measure believe that our people have degenerated and cannot care for themselves, but must become wards of the state, that they must sacrifice their independence and individualism and, no longer self-reliant, be guided by some central authority.

The burden of the care of women in maternity and their infants rests upon the physicians of the state, who have been licensed by the state to practice medicine, surgery and obstetrics. It is therefore inconsistent for the state to qualify physicians to practice obstetrics and also authorize and employ a group of welfare workers, not trained as physicians or obstetricians, to instruct women in matters relating to maternity and thus nullify the medical practice law of the state.

No practical good can come from lay instructors who must ultimately advise competent medical attention, which information can be imparted without the elaborate and expensive system contemplated in this law.

Another species of governmental control of medical practice is the limitations and restrictions placed upon physicians in regard to the

use of narcotics. The Harrison Narcotic Act became effective in 1915. At first every physician who prescribed or dispensed drugs included in the law was required to pay a license fee of \$1.00 per year and later this was increased to \$3.00. A tax is usually levied because of some benefit but the physician is not benefited by this law. It was passed to restrict the use of narcotic drugs by addicts. However, though the tax is unjust, it is not nearly as arduous as the keeping of records, inventories and other burdensome paper-work features of the law.

At the time this is written there is considerable agitation concerning the medicinal virtues of certain alcoholic beverages. One day they are medicines; the next all their medicinal virtues are wiped out by legislation. Wonderful alchemy! Questions affecting the public health are evidently not to be settled by medical men. Their advice is not sought. Two opposing forces line up in legislative halls and determine to make right and not to decide scientific questions according to facts. This tendency on the part of those ill prepared to solve the problems of public health is an ever-growing menace.

We have considered the problem of the care of the sick and injured from an economic standpoint. We have attempted to show that the practice of medicine is undergoing changes from the old order. The influences at work within and without the medical profession have been reviewed. The whole question is not medical but economic.

Economically the health of the people is of paramount importance. Illness and accident must be prevented as far as possible. The sick and injured must be restored to health with as little economic loss as possible. Economically the medical man is entitled to a fair return upon his investment. How can this best be accomplished?

There are many discordant factors difficult to harmonize. With the confusion that now exists there can be no definite solution of the problem unless some of these factors are discarded. It appears that attempts to solve the problem upon a community, collective or socialistic basis must fail, for it does not concern the community as a whole, but relates to individuals as such. The average man is able to provide medical care for himself and his family. Laws cannot produce economic results. It is impossible to equalize or eliminate economic loss from illness. We must provide for exceptional cases by private or organized philanthropy. But we must emphasize and stress individual responsibility, thrift, the Golden Rule, honesty and self-reliance. And when these simple, easily understood, natural and possible virtues are properly emphasized, we will have no need for

imported, complicated, expensive, unnatural, undemocratic and impractical devices to care for our sick and injured. We do not need governmental control or aid. We do need to practice some of the simple, tried and proved principles that have so successfully guided us in the past. To quote Dr. Raymond Pearl: "We shall save a good deal of money and human energy if we first take the trouble to prove that what we are undertaking to do is in any degree likely to achieve any useful end."

AN OLD INDIANA BOOK ON MEDICINE

A BIT OF INDIANA MEDICAL HISTORY

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A writer, some time gone, has spoken warmly of "old books, old friends and old wine". The old medicine book of which I would write is interesting, but does not belong in the class with old friends and old wine. There is no charm, no literary fine quality in it to arouse feelings of intellectual pleasure, but truly it is interesting.

It was published in 1836, in James McCall's Herald Office at Columbus, Indiana. The paper is poor in texture, is tender and tears easily, and has grown yellow and brown, the effect of the tooth of brutal Time. Time too shows its effect upon the plain brown leather binding, although it is true leather and not a base imitation. The types are worn and the workmanship is poor.

The author announces himself upon the flyleaf of the book to be Dr. S. H. Selman, and the title chosen is "The Indian Guide to Health, or a Valuable Vegetable Medical Prescription for the Cure of All Disorders Incident to This Climate". Between this full title and the name of the author we find this: "Designed as a guide to families and young practitioners."

The "Introduction" (he does not say preface) begins with a sentence containing one hundred and twenty-one words. It is decidedly high sounding and carries a flavor of bitterness and protest. It reads: "In all ages of the world the Science of Medicine has engaged the particular attention of the most learned of every nation: and of late years the time and talents of eminent individuals have been employed in communicating to their fellow-men dissertations upon Domestic Medicine; for which they have been censured by a majority of the medical faculty, who, with the most effrontery, assert that, by so doing, 'Every man is made his own physician'; and the consequent result is, that a majority of those who pretend that they have made themselves acquainted with all diseases, and their proper remedies, have to resort to some other occupation to gain a livelihood, and the Science is thereby injured."

How completely this sentence proclaims the man. He announces in it that he is irregular, and without doubt he never saw the interior of even an eclectic college, not to speak of the chiropractic college at Fort Wayne.

Despite the long beginning sentence Dr. Selman closes his introduction without great extension. His ending sentence is—"The reader will find in the latter part of this work, a *Materia Medica*, which points out the 'simples' wherewith the divine Creator has, in his wisdom, planted our gardens, fields and woods for the healing of our infirmities." He doesn't venture upon a reason why the Creator visited the infirmities upon us.

Dr. Selman wastes no words in presenting what he has to tell but "goes to it" head on. His first information is in regard to Herpes. To show his style I produce his entire matter on this subject.

HERPES

"Herpes consists in an eruption of broad itchy spots dispersed here and there over the skin, of a whitish or red colour, which at length run into each other, discharge a thin serous fluid, and either form extensive excoriations or ulcers. After a certain time scurfy scales appear, which peal off, and leave the under surface red; the same appearances are, however, renewed in a successive series, till the disease is either cured, or goes off spontaneously, which is indeed rarely the case. Being a complaint confined to the skin, it seldom happens that the general health suffers any great change. Its causes may be referred to a want of cleanliness, a low diet, and a damp situation; but certain constitutions seem nevertheless particularly predisposed to herpetic eruptions. The best remedies for these eruptions are ointments; such as the oil of corncobs, pennyroyal, sparcemint, etc. While using the ointments, use cooling medicines inwardly, such as senna, salts, etc. Bleeding is also necessary while using the ointments, let the diet be light, there is no difficulty in this case if proper care is taken."

He next tackles "Tinea, or Scalled Head." His description is very good and he suggests "It is propagated by contagion, either by using a comb with the matter from the head of a person laboring under it, or by putting on his hat or cap." His prescription is as follows: "The hair should be shaven off the head and covered with an ointment made of dogwood berries, and the flowers of mulberry, stewed together in sweet oil or hog's lard. This should be used every night and morning. The head should be frequently washed in castile soap and new milk, it also may be washed at times in copperas water. If the glands of the neck should become swelled, a small blister should be drawn on the back of the neck, and be kept a running a few

days. By pursuing this course there is no difficulty of performing a cure. Scalled Head is very unpleasant, and as the doctors of today now know of this cure from the past, the passing of the disease is imminent."

The short chapter on "Hemoptysis or Spitting of Blood" is noticeable in that he differentiates between it and pulmonary hemorrhage. Under spitting of blood he says in part:

HEMOPTYSIS, OR SPITTING OF BLOOD

"In hemoptysis there is a discharge of blood of a florid colour, and often frothy, from the mouth, brought up with more or less of coughing or hawking, and preceded usually by a saltish taste in the saliva, a sense of weight about the precordia, difficult respiration and a pain in some part of the thorax. It is readily to be distinguished from hematemesis, as in this last, the blood is usually thrown up in considerable quantities, is moreover of a dark colour, more gumous and mixed with the other contents of the stomach, and is unattended by any cough; whereas blood proceeding from the lungs is usually in small quantity, is of a fluid colour, fluid mixed with a little frothy mucus, and brought up by coughing. A spitting of blood arises most usually between the age of sixteen and twenty-five, and may be occasioned by any violent exertion, either in running, jumping, wrestling, singing, speaking loud, or blowing wind-instruments; as likewise by wounds, plethora, pneumonia, weak vessels, hectic fever, coughs, irregular living, excessive drinking, or the suppression of some accustomed discharge, such as the menstrual or hemorrhoidal. It may be occasioned by breathing air which is too much rarified to be able properly to expand the lungs. Persons in whom there is a faulty proportion either of the vessels of the lungs, or the capacity of the chest, being distinguished by a narrow thorax and prominent shoulders, or who are of a delicate make and sanguine temperament, or who have had previous affections of the same disease, seem much predisposed to this hemorrhage; but in these the complaint is often brought on by the concurrence of various occasional and exciting causes before mentioned. A spitting of blood is not, however, always to be considered as a primary disease. It is often only a symptom, and in some disorders, such as pleurisies, peripneumonies, and many fevers, often arises, and is the presage of a favorable termination, if only very slight. Sometimes it is preceded (as has already been observed) by a sense of weight and oppression at the chest, a dry tickling cough, some slight difficulty of breathing, and a hard jerking pulse. At other times it is ushered in with shiverings, coldness of the extremities, pains in the back and loins, flatulency, costiveness, and lassitude. The blood which is spit up is sometimes thin, and of a

florid red colour, and at other times it is thick, and of a dark or blackish cast; nothing, however, can be inferred from this circumstance, but that the blood has lain a longer or shorter time in the chest before it was discharged.

"It seldom takes place to such a degree as to prove fatal at once; but when it does, the effusion is from some large vessel. The danger, therefore, will be in proportion as the discharge of blood comes from a large vessel or a small one, and as the quantity is profuse or trifling. When the disease proves fatal in consequence of the rupture of some large vessel, there is found on dissection a considerable quantity of clotted blood between the lungs and pleura, and there is usually more or less of an inflammatory appearance at the ruptured part. Where the disease terminates in pulmonary consumption, the same morbid appearances are to be met with as described under that particular head, etc. As the general symptoms of this complaint is laid before the reader, we shall in the next place proceed to the treatment of the same; The first thing necessary is to produce that regular action of the lungs that nature requires, this may be done by astringent medicines such as the following:—Take half an ounce of pulverized cinnamon bark, the same of gum kino, the same of cubebbs, add these articles together in one pint of alcohol, let it stand for three days, the patient should take of this a half a teaspoonful three times a day combined with honey, this course of treatment should be pursued for several days. The patient should also take, a teaspoonful of sweet oil every morning combined with two grains of loaf sugar and five drops of laudanum, the constant drink should be a weak solution of cream of tartar combined with small portion of sugar of lead, if the bowels are costive the patient should use the tincture of aloes, or a strong tea of peach tree leaves, should there be any fever bleeding will be also necessary. If the stomach appear weak and much debilitated, a few drops of elixir vitriol should be used in a little weak tody two or three times a day. A small pill of opium may at times be taken. The head should be frequently bathed in cold water. The diet should be very limited, etc. I have laid down a few prescriptions and if the patient attends to them strictly he may be relieved."

Dr. Selman was at times a close observer, but very frequently essential and even obvious facts were invisible to him. This certainly is not strange, for the same thing happens even in "this know it all day".

Our author gives a long chapter of twenty-two pages on "The Diseases of Pregnancy". His descriptions show he was not a poor observer, and had extended experience. He warns against taking cold and becoming constipated.

"Toothache," he gravely says, "is painful and irritating and is to be feared". He prescribes oil of cloves and other essential oils to relieve, but says nothing about extraction, and is, of course, silent about treatment and repair by filling with gold or other materials, for modern dentistry was in swaddling clothes in his day. He directs—"When peculiar longings arise in a state of pregnancy, they should always be gratified if possible, as women are apt to miscarry from the anxiety these occasion, when not indulged in them: but that the child in the uterus can be marked by any depraved appetite of the mother, be mutilated by any disagreeable object being presented to her, can not be admitted. All aberrations from the usual form ought to be ascribed to the irregular operation of the powers concerned in generation, and are not produced by the imagination of the mother". If Dr. Selman arrived at this conclusion from his own observations he is certainly entitled to credit, for in his day the general idea in medicine as well as among the laity was that acquired characters were inherited and that awful sights seen by a mother might mark her child.

Mr. George Pence, of Columbus, who discovered Selman's Guide, says: "The book is highly impractical in these days, for its prescriptions call for whiskey, French brandy and gin, and the distillery over on Haw Creek and the one at Tannehill's are not making full time as in 1836."

The classical chapter of the book is entitled "The Cramp Colic". His description is graphic, even startling. He says: "The cramp Colic cramps the stomach and draws the patient sometimes nearly double with violent pains all through the breast, and will roll through the bowels like goose eggs, and sometimes goes off with a lax, a discharge of wind up or down before the patient can get any ease." For the cramp colic our "yarb doctor" prescribes parched peas eaten freely, also a gill of dogwood berries boiled in a quart of water down to half a pint. He remarks "this is wonderful and so is a large burdock leaf in a quart of water boiled down to a gill and drank".

Costly colic treatment for the present time would be the last prescription; "take a young shoat and cut it open in haste and obtain the gall and drink it." Of his last prescription he says: "But of all medicines I have ever used is garlic boiled in new milk, this often relieves the quickest of any remedy that I have ever tried."

This chapter is fittingly closed with a stanza of rhyme as follows:

"This disease is very bad,
And cramps the patient up;
And if a cure can't be had,
You'll soon be drawn enough."

Dr. Selman, after giving his remedies for toothache, ends this chapter with the following effusion:

"I am sure this will cure,
If properly applied;
It's not hard, for to endure,
It's been frequently tried."

Only a few chapters of this interesting book are adorned with poetry and one more quotation will seal in our minds the poetical sweep of this early medical writer. At the end of the chapter on Scrofula or King's Evil, over which he claims complete control, is found this:

"Afflicted patients with this disease,
Have often come to me for ease;
(Tho much distressed have been their case,
I have never failed in curing them.)
I have never failed in curing all.
Who to me have made a call."

It seems that only one edition of Selman's Indian Guide was ever published and the price is not given.

"THE PHYSICIAN"

HOW MAY HE GROW OLD GRACEFULLY?*

FRANK B. WYNN,
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In the evolution from infancy to old age, man passes through several distinct physiologic periods, each dominated to a large extent by rather characteristic mental or emotional traits. The instincts govern infancy in great measure. In childhood the imagination runs riot, the growing nerve centers not yet having acquired the faculty of properly analyzing and interpreting afferent impulses coming through the senses. Hence the imaginative desires call for fairy tales, the barbarous exploits of Indians, or pirates. Very different indeed, but just as distinctive, is the epoch of adolescence, when the over-weaning sex-ego asserts itself. This is the heroic or castle-building period when the young swain writes in verse his adoration of the female counterpart who chances his way, craving the ecstasy which her praise will bring. Next comes the dynamic period of life when maturity pushes youth aside and says: "I'm a man. Give a real task to perform." These are great days when a man is in the making. Hope leads on whilst brawn and nerve do the work. So for better or for worse he strives while the slow oncoming years stingily reveal

(*). Last of a series of articles by Dr. Wynn which have appeared regularly in THE JOURNAL.

their rewards or failures. In a few years he strikes his gait, thence passing along the fastigium of his career conscious of power and influence, or lagging and discouraged because of failure. This is the long, work-a-day period which tells of triumphs or defeats. It should be the harvest time of life—material, mental and moral. Sudden rise to success in this period is apt to beget arrogance and conceit, harmful to subsequent progress. Better steady growth upon a carefully constructed foundation—a life of activity which mellows gradually into an attitude of stimulating and helpful reflection.

And now comes the last physiologic stage—the period of failure in power, mental and physical. At all events so frequently do these weakening physiologic activities appear, that the world by common consent has come to speak of old age as the period of senile decline. Must we needs accept senile decay as inevitable, unpreventable? As physicians have we not been entirely too prone to accept a stupid, irritable, and useless old age as an unavoidable misfortune calling for pity and forbearance? In passing along the gamut of life's changes should it not be possible so to shape our conduct that each period will attain its full fruition? Let our actions always be attuned to the consummation of a satisfying old age; not a thing to be dreaded, but a calm and serene sunset, glorious in its coloring, wise in its counsels, fine in its dignity. Who has not occasionally seen persons who have thus passed into a green old age? Have we not looked upon them and secretly hoped that such benign and hopeful serenity might settle upon our brows; that their steadfast faith and luminous hope might in like manner brighten our eyes as age dims the sweep of vision. Can we do aught to bring it to pass? This should constitute one of the finest aspects of far-seeing preventive medicine, so shaping the lives of men that toward the end, instead of inert gloom there should be freshness and fruitfulness. Not to all can such a happy consummation come, but their number might be multiplied a thousand-fold.

The purpose of the present discussion is more particularly to apply what has gone before to our own profession. Who has not observed again and again the physician who has spent an arduous and self-sacrificing life suffer in his old age the melancholic realization of diminishing business; heart-breakings because formerly devoted patrons are deserting him for the younger generation of practitioners; the embarrassing and saddening truth beginning to dawn upon him that the community will soon mark him as a "back number". Under the clouds of waning practice, powers and accumulating discouragement he is not able to envision new fields which he can cultivate. In truth so

devoted has he been to professional labor that he is unfitted for anything else. All other forms of activity are strangers to him. In gloom he casts about for something to which he can lay his hand with interest and the consciousness of usefulness to the community.

The physician who would grow old gracefully must begin early. Throughout his career he is sowing seed which in his old age will mature as a repellent thorntree of cynicism and despondency or a tree which will bear the good fruit of contentment and usefulness. Very important indeed is it to acquire the right psychological attitude toward the whole problem of medicine. Whatever bent is pursued with vigor and tenacity can but exercise an important influence over the declining professional career. If the mastering passion is for "big business" and money getting to the exclusion of medical study, professional cooperation and genuine service to one's fellows, it may be sowing for a whirlwind at the close. The public, quick to acclaim the practitioner's business success, will be just as quick and quite unsympathetic in proclaiming a younger hero. Whether animated by mercenary motives or professional ambition the tendency is toward the same end. Quite a few operative surgeons belong in this group. In the long run they are apt to present a pathetic picture. Younger men come rapidly to the fore, in competition, writing papers and in other ways pushing for legitimate recognition and professional prestige. Capable and up-to-date or not, the senior practitioner will sooner or later find that he is losing his grip. He refuses to admit that the public is calling for younger men. With galling embarrassment he notes business going to others. He is very prone to become cynical and pessimistic. Such examples are not at all rare. Let the man who is in the midst of large practice remember that his day will soon pass. He should look forward to this change in his career with cheerful resignation, yielding to the younger generation with becoming grace. It will be better for his business but what is still more important it will contribute to his peace of mind:

Let not the argument just offered be construed as opposed to sound business principles. Industry and honest economic thrift in medical practice as elsewhere, constitute praiseworthy virtues. No weightier responsibility rests upon the shoulders of the active practitioner than the obligation to his own flesh and blood—the making of financial hay while the sun shines; the laying aside for a rainy day and old age. Besides frugality in habits this implies the keeping of orderly accounts, the charging of adequate compensation for services rendered, and the systematic collection of moneys due. It should

comprehend the carrying of sound life insurance—as family protection or as a safe investment. With a view to a permanent income during his declining years the far-seeing practitioner should early acquire the habit of putting aside definite amounts at regular intervals in conservative investments—preferably well chosen real estate, rather than those enterprises which fascinate with the prospect of large returns, but are attended by serious hazard. That medical men of high intelligence should occasionally be duped into the purchase of mining, gas or oil stocks would be ludicrous were it not so often disastrous to their hard-earned accumulations. Better a stable investment insuring certain if modest income than gamble for larger returns likely to prove a losing venture which will place upon old age a crown of thorns.

The cultivation of a habit of friendly cooperation with professional colleagues will prolong the fastigium of one's professional activities. There will arise less of the frictions, heart-burnings and disappointments which beget in advancing years a state of senile irritability, a sort of grouch against everything and everybody. In its stead will arise a bearing of good-fellowship and mental poise conducive to happiness, health and long life. But the finest rejuvenation for the aging physician comes from comradeship with young medical students and the younger generation of practitioners. How desirable, how important for each that there should be here a better understanding! On the one hand what harsh and irreverent conduct is that in a young man who cynically speaks of his senior colleague as a "moss-back"—heaping upon him ridicule and contempt because he fails to know some of the newer revelations of medical research and practice. How thoughtless and shortsighted in his reflections, for will not he some day be accounted a "back number"? Nor is a young man's ridicule any more to be excused than an old man's contempt. The point at issue is to emphasize that each should recognize the physiological transformations which take place. Both should be comrades sharing in the labor, the spirit and the cause of progressive medicine. True, the senior may not seek to do the technique of the laboratory or operating room, but he will be made younger and more alert by knowing about it. The junior member will learn from elder counsel the art of managing men, of understanding friendly service and psychological control, which look upon man as more than a machine. Such contact brings about reciprocity of the most elevating form—making the young wiser and putting into age the fire of youth and hope.

To grow old with equanimity requires patience, courage, charity for human shortcomings and abiding faith in one's fellows. With the period of old age nearing, we protest against

its approach. Ostrich-like we hide our heads and try to make believe it is not the real thing. Thus coddling ourselves into the false view that we can do just as we used to, we fail in measuring up to our former standards, and of necessity fall below newer standards established. It were better to acknowledge that a different physiologic period has supervened and try to adapt ourselves to the obligations of a new order. In the early years of life we are expected to do childish things; but when we have crossed to the realm of full maturity we should put aside childish ways. Failure is the penalty if we do not obey this law of change.

Just as natural and real is the transition from the long and active fastigium of life's stresses to the quieter period of age decline. I protest against this always being classified as a retrogressive stage of human existence. True it may signify retrogressive and degenerative alterations in blood vessels and various organic structures; but let us not forget that progressive advancements are possible then in some of the finest mental and moral qualities of human accomplishment—the beautiful things of the spirit which may bless just as abundantly as any of the so-called practical qualities of active professional life.

The gradual transition from an active practice to what should be the more serene but not less useful period of advancing age means the giving up of many arduous duties and responsibilities. It is right and best that they should be surrendered to others. Let it be done without grudge or criticism. Sad to relate many physicians, and especially surgeons, seem incapable of doing this. They refuse to understand why patrons, once so devoted to them, are now turning to younger professional men. A higher conception of duty and even the practical philosophy of their own interest call for cheerful resignation to the changing physiologic conditions.

Equally important with giving up the old order is to be able to adapt one's self to the new of the declining age period. For years before, the far-seeing physician should have been evaluating his capacities with a view to preparing himself for efficiency in the old age period. Unfortunately most men, during the hey-day of professional activity, seem to consider that it is only necessary to put by funds for shelter, food and raiment; but is not the more important thing to plan to have something to do in declining years, which will satisfy the soul? The real man draws back at the thought of rusting or rotting. He would be a hero and die in the harness.

Resigned to give up active medical or surgical practice, the question is what may be

undertaken as a substitute to hold mental interest, arouse enthusiasm and give the consciousness of useful service? A brilliant light along the pathway of advancing age is always to be found in children. Happy should be the physician, therefore, who has children or grandchildren, with whom he may share comradeship—rejuvenating to him as it will be delightful and instructive to them. This is really nature's order—going back to the things which were a joy in early life. If children are not to be found in the family, then it should be the duty and pleasure of the aging physician to cultivate their companionship elsewhere. Abundant opportunities exist for the development of this rejuvenescence—in hospitals, orphan asylums, fresh air missions, schools, boy-scout organizations and the like. Frequent and wholesome contact of the right kind of elderly people with children constitutes the finest and most useful sort of social service—a type of psychologic training which cultivates reverence for old age, a thing too often neglected in our day when "Young America" is prone to shun the aged as crotchety and unsympathetic.

The cultivation of a habit of recreation is a duty which every physician owes to his patients as much as to himself. Rotation and variation in the stressful routine are just as necessary to his highest productive efficiency as rotation in crops is essential to fruitful production in the fields. Under a false conception of duty to patients too many allow exhausting activities to wear out their own mental soil. How necessary, therefore, the practice of wholesome recreation—the kind which rests, rebuilds, puts coloring and dynamics into the psychological realm of one's nature. Consideration of these matters in the proper season of life begets an enduring nervous constitution which functions with vigor and interest far beyond the accustomed span of years. Recalling those in the profession who have profited by this recreational philosophy, memory pictures some of the finest types of physicians who in their declining years have gone in pursuit of the finny tribe—ambling along mountain brooks in search of the shy trout, or gliding over lake in quest of the furtive bass or the gamey muskellunge. Who has not frequently seen the aged physician of this type, fresh from an excursion into the open; his youth renewed, his eyes glistening with delight as he recounts the experiences of his outing. But if one would reap the benefits of such wholesome sport in old age, he must develop the skill and love of angling early in his career.

For the busy practitioner's annual vacation, no form of recreation is more popular than travel. Physicians are excellent travelers. Aboard ship or on a great transcontinental train where the force of circumstances throws people

together and brings to pass oftentimes the most delightful acquaintanceship, it generally transpires that a physician will be found in the group. Furthermore he is very likely to be reckoned a favorite in the party. His life-long mixing with all classes has trained him how to meet people and situations. His powers of observation have been made acute so that nothing of unusual interest escapes his attention.

Upon matters of scientific bearing his opinion is likely to be sought. He understands the laws of practical psychology and comradeship. His intelligence and adaptability make him a favorite. On his own part travel is most enjoyable. He can cheerfully accept disagreeable situations, turning misfortune into comedy—a rare gift.

Finally the physician as a traveler brings to his home environment the benefits of his sojourn abroad. He is eager to apply the knowledge gained to community improvement, whether it be in educational methods and equipment, improved streets, adequate and artistic public buildings, park development, playgrounds for children, more beautiful trees, flowers or comprehensive city planning. It has always been a matter of extreme pride to me how frequently physicians who have seen the world, exhibit the capacity and disposition to apply the knowledge thus gained for municipal or community betterment. It is a fine exemplification not only of good citizenship but of the wise application of principles which will be conducive to happiness and longevity.

Of the recreations regularly available for city practitioners, golf is perhaps the most popular. It fulfills the requirement of good hygiene, excellent sport, and delightful companionship. Age makes no distinction as to its votaries. It is worthy of remark what a large number of older men, even those of advanced age, become quite enthusiastic over the sport. Physicians should acquire the golf habit early as preparatory to the spirit and freshness which it will add to declining years.

Agriculture, horticulture or floriculture as business enterprises are not advisable for physicians retiring from active practice. At any rate to carry large undertakings of this character to successful issue will exhaust rather than rebuild and prolong life. On the other hand if they are entered upon in a small way, as creative pursuits and not as business enterprises, they are commendable.

This thought suggests nature study as a creative and rejuvenating activity for elderly physicians. Wherever in America the research student of history goes he will find the physician was a pioneer of fundamental scientific teaching in the community. In the offices of the doctors of the old school who still linger to bless their respective communities, there will often be found a collection of archeological or

geological specimens, some of them surprisingly complete. In the earlier days long journeys on horseback through virgin forests, over rugged hills and along stony creeks gave ample time for meditation and observation. An interest in natural phenomena was forced upon the physician. He became the authority upon trees, plants, wild flowers, and fossils; on the habits of bees, bugs, birds and animals. I would make earnest appeal for a revival of interest among physicians for nature-study; first of all for its hygienic, and instructional value throughout one's career, but especially for its beneficent influence in bringing to pass a green old age.

Sudden transformations frequently take place in the inorganic world, as earthquakes, storms, flood and fire. But where life processes go on, the method is imperceptibly slow. Particularly if the vocational energies have been for long very intense, nature protests against sudden cessation. For example if the athlete or prize fighter, trained to the limit, suddenly halts in his activities, he becomes rapidly soft and is quite prone to degenerative weakening. Similarly I have seen the hard working farmer at sixty, sell his land, move to town, begin a period of idleness, over-eating and under-exercising, and start rapidly down the disease toboggan, developing arteriosclerosis, hypertension, chronic cardio-renal disease with their multiplying sequellæ.

As in the case of physical pursuits, so in the mental realm, sound physiology counsels against sudden cessation. How shall we apply the same principles to the practice of medicine? Not a few practitioners who have pursued an intensive career up to the sixth decade, and have laid by a competence for the rainy day and old age, suddenly abandon medical work. With conscious pride they announce to the world that they have earned the right to ease and rest. Instead of the coveted relaxation and contentment, restlessness and dissatisfaction drive tension up. If according to one's scheme, medicine is to be completely abandoned (and such a course is often advisable), then plans must be carefully devised to occupy interest, give the consciousness of usefulness, and afford a certain amount of physical activity as well.

The physician's training and association with all classes and conditions of men fits him for understanding their psychology—their virtues, weaknesses. His knowledge of biology, hygiene and sanitary science prepare him in an unusual way to grapple with civic and public health problems and enables him to advise wisely in their solution. Naturally and logically therefore he should and does often fall into positions of public trust. Frequently it should be the duty and pleasure of the physician, during the terminal phase of his career, to serve upon Boards or Commissions concerned with Public Health, Education, Park Development,

Recreation, Civic Improvement, Charity, etc. Such work constitutes one of the finest and most serviceable forms of activity in which he may engage. I have known several such who have rendered a conspicuous public service, incidentally honoring the profession. The inclination of some men to enter politics after retirement from practice is rather a dangerous experiment, for the uncertainties, irregularities and intensities are almost as harassing as professional work.

Every physician should cultivate early the habit of good reading, literary as well as medical; less of the daily, sensational trash and more of standard literature; always the best and most recent medical books and periodicals. During the period of active professional life good reading is a necessity if one would keep pace with progress. Its benefits never cease. For those who have passed the biblical allotment of years, what a storehouse of pleasure and companionship is found in good books! They offer the geniality of old friends and the interest of new ones. They keep the faculties burnished when otherwise they would rust. Thus from retained freshness and accumulating knowledge such physicians radiate a helpful influence everywhere. To children and youth they become inspiring companions. Reciprocally they receive from the young a benignant and life-lengthening tonic. These are physicians who learn the art of growing old gracefully.

Very fallacious is the view too generally entertained, that physicians in the terminal decades of life should neither study nor write. Let the senior practitioners of medicine awaken to their serious duties and responsibilities toward the profession. More particularly would I urge the obligation to history. The foundations of all future progress are laid upon history. Medico-historical research is an inexcusably neglected field. Let not those who take vain pride in doing a large practice flatter themselves that future generations in medicine will care much for this fact. In truth the future is more likely to give its meed of praise to the man who in his declining years records with faithfulness the story of prevailing epidemics; describes the course of public health movements, the rise and decline of isms and cults, and the medical fashions of the day; narrates incidents of medical sacrifice and heroism and carefully prepares the biographies of medical men who have lived in the region; collects, preserves, and describes medical relics.

Illustrating the appeal here made, Indiana has produced a striking example in the person of G. W. H. Kemper of Muncie. However fine may have been his career as general practitioner and obstetrician for fifty years, this service has not equaled in value to the profession the labor he performed after seventy, delving into the

life history of almost every doctor who has practiced in Indiana. What interminable patience it required but what a splendid reward in the gratitude of the profession and the beautiful volume produced. His example is worthy of general emulation. Are not the worth-while achievements and heroic deeds of medical men as much entitled to historic record as the lives of the captains of industry, the princes of wealth, the idols of shifting political life or the heroes of battle?

Behold how great is the reward of the faithful in medicine! The cup of the well-rounded physician's life is full to the brim with precious memories of friends. His acts of sacrifice and heroic devotion are glorified by the gratitude

of aching hearts, and in the brightness brought to downcast eyes. Perchance his labor may have revealed some new scientific truth, or devised a better method of treating disease. Let the stream of his life flow on, bearing upon its current the buoyant craft of human service until it floats into the sea of eternity. Thus in the journey toward life's end, his paths will be those of peace and his rewards those of the just. As the prophet of old spake, so will it be said of him today: "The skill of the physician shall lift up his head and in the sight of great men he shall be praised." (Ecclesiasticus xxxviii:3).

THE END

CHAULMOOGRA OIL IN TREATMENT OF TUBERCULOUS LARYNGITIS

This report by R. M. Lukens, Philadelphia (*Journal A. M. A.*, Jan. 28, 1922), gives the results of sixty cases of tuberculous laryngitis treated over a period of eight months with chaulmoogra oil. The treatment was conducted more for the purpose of learning the effects on the pathologic lesions of the larynx and the symptoms than on the tubercle bacillus itself. Chaulmoogra oil gave promising results from the beginning in cases in which there were dysphagia and pain in the throat. In the majority of cases it exerted an analgesic action on the larynx, which became more complete after repeated treatments. While improvement in the lesions is slower than was hoped for, yet cases treated with chaulmoogra oil have responded as rapidly as those treated with other drugs, and the treatment is much more easily borne. Preliminary cocaineization has not been necessary, and there has been no pain or discomfort in the throat afterward, but rather a pleasing sensation of warmth in the throat and chest. In the cases in which intratracheal injections were made, sputum was rendered more fluid and was expelled with greater ease. Dryness of the throat, which frequently is present in tuberculous laryngitis, was improved but slightly in the majority of cases. At first the oil was applied by means of a cotton tipped applicator saturated with a 10 percent solution in liquid petrolatum directly to the laryngeal surface. Later the strength was increased rapidly up to the pure drug. Chaulmoogra oil works best by intratracheal and intralaryngeal injection. One cubic centimeter of the oil, of the strength desired, usually 10 or 20 percent, in liquid petrolatum or olive oil, is drawn up in a Luer syringe armed with a metal eustachian catheter. While the patient holds the tip of the tongue, wrapped in a paper napkin, between the index finger and the thumb of the right hand, the syringe tip is introduced, guided by the throat

mirror, into the pharynx (not the larynx) above and behind the epiglottis, care being taken not to touch any portion of the mouth or throat. Two-thirds of the contents of the syringe is discharged, drop by drop, into the trachea while the patient breathes quietly. The remainder is then dropped on the cords while the patient phonates. In this way, cough following injection is very slight and often absent. When present, it occurs within five minutes after the injection and lasts for a minute or two.

DELETERIOUS EFFECT OF BLOOD TRANSFUSION

It is stated by Lester J. Unger, New York (*Journal A. M. A.*, Dec. 31, 1921), that biologic tests demonstrate that the transfusion of whole, unmodified blood is of far greater value than that of citrated blood. Sodium citrate, even in the low percentage employed in a citrate transfusion, affects the red blood cells, rendering them more fragile. The value of such blood to a patient suffering from a hemolytic disease, such as pernicious anemia, is lessened to that extent. Sodium citrate diminishes the available quantity of complement in two ways: by its direct action on complement itself and by introducing into plasma an anticomplementary substance which fixes complement. This substance is obtained directly from the bodies of red blood cells. Sodium citrate also reduces almost to nil the function of opsonins, and practically destroys the phagocytic power of white blood cells. Furthermore, the phagocytic index of the blood of various donors differs. Since complement and the phagocytic power are of prime importance in the protective action against pathogenic organisms, whole unmodified blood from a donor with high phagocytic index should be employed when attempting to combat local or general infections by means of transfusion. In selecting a donor, attention should be paid to the finer qualitative differences in the blood.

**THE JOURNAL
OF THE
INDIANA STATE MEDICAL ASSOCIATION**

Devoted to the Interests of the Medical Profession of Indiana

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Office of Publication, 406 W. Berry St., Ft. Wayne, Ind.

APRIL 15, 1922

EDITORIALS

VACCINES IN WHOOPING COUGH

In a recent article Appel and Bloom of New York City have given an excellent resume of the work done in the treatment of pertussis with vaccines. For some thirteen years the discussion has gone on—more or less half-heartedly through lack of sufficient enthusiasm on the part of its protagonists rather than because of any opposition. Briefly their position is this—that the use of a vaccine is logical because of the infectious character of the disease and because it produces a low grade toxemia; that its value is greater the earlier it is used and that it should be a mixed vaccine since the bacillus pertussis is always accompanied by secondary invaders. They recommend a vaccine containing per cubic centimeter

Bacillus pertussis.....	1,000,000,000
M. Catarrhalis.....	200,000,000
Staph. Aureus.....	200,000,000
Staph. Albus.....	200,000,000
Streptococcus	200,000,000
Bacillus Influenzae.....	400,000,000
Pneumococcus I.....	50,000,000
Pneumococcus II.....	50,000,000
Pneumococcus III.....	50,000,000
Pneumococcus IV.....	50,000,000

The dosage advised was $\frac{1}{2}$, $1\frac{1}{2}$ and 2 c.c. given intramuscularly every other day.

Study of the statistics quoted as well as their own results justify their support of this form of therapy. As they suggest, its value particularly as a prophylactic must not be lost sight of merely because it is not 100 percent efficient. If as results seem to indicate the average duration of the disease is reduced to 30 days, its severity mitigated, the number of complications reduced and the mortality lessened, the use of vaccine therapy, at least as an adjunct to other methods of treatment, needs no further recommendation.

PATERNALISTIC MEDICINE

At the present time the medical profession is confronted with some very grave problems upon the solution of which depends the very life of the profession. It is unfortunate that various

forms of socialistic, paternalistic or communistic medicine have been proposed by some of the leaders of our profession, and it is equally lamentable that these propositions have been supported in a perfectly innocent way by a few members of the medical profession who have not analyzed the situation sufficiently to appreciate the dangers that threaten if we adopt such a policy as proposed. In short we are not only heading toward bureaucratic medicine, but we are heading toward the extinction of the medical profession as a profession and the abolition of private practice. We appreciate the fact that some easy going individuals consider this an alarmist statement, but such is not the case. Already we are adding to the functions of federal, state and municipal agencies which have to do with the recognition and treatment of disease conditions, always widening the scope of the work and increasing the activities so that they encroach upon the private practitioner of medicine. Along with this we see our hospitals and institutions of learning encroaching upon the private practice of medicine through our free clinics, and their newest activity—the community clinic—separated from but under the control of these institutions. All of this means but one thing and that is a drift toward state medicine, a term as used by us meaning the practice of medicine in any of its phases under the patronage and control of federal, state or municipal authorities and in direct competition with the private practice of medicine. Some may say, "Well, what of it? Wouldn't it be better to have our sick and disabled population under medical care and treatment by the state with its abundance of capital and resources than under private service with all of its limitations?" To this we answer emphatically, "No!" Practically every activity of the government, whether federal, state or municipal, is the football of politics. The practice of medicine would meet no better fate. It would functionate first, last and all the time through political preferment, and political preferment never has and never will depend upon capability or efficiency, but depends upon expediency. The regular medical profession as it exists today, with its long record of scientific advancement and wonderful achievements in the recognition and cure of disease, would have little voice in shaping the policies of medical service under state control, for the pseudo-medical cults and all of their followers, including the ignorant and gullible, would not only far outnumber us and bring more political pressure to bear but they really would be more active politically than we ever have been or could ever hope to be in view of the natural repugnance we have for political activity. It is bad enough to have our governmental agencies so frequently in the hands of incompetents, but it would be still worse to

place the lives and health of our citizens into such hands, and that is exactly what would happen if the practice of medicine was placed under state control and thus made the football of politics. We have been quite content to support state medicine which has to do with public health matters as controlled and regulated up to the present time, but we are unalterably opposed to the widening of the scope of this work so that it includes any and all phases of the practice of medicine, as we also are opposed to lay domination of or dictation concerning the management of our hospitals, teaching institutions, clinics, or any phase of medical practice.

NATIONAL HOSPITAL DAY

May 12 has been designated as National Hospital Day, and hospitals all over the United States and Canada, and even England and Australia, are planning to observe the day with programs of various sorts.

Last year about 1,500 hospitals in the United States and Canada observed the first annual Hospital Day, and aside from educating the public regarding hospitals and all phases of hospital service, it is reported that as a direct result, many applicants for the nurses' training schools and many donations of supplies, equipment, and money were received.

The success of this project last year is an inspiration to greater effort this year. Dr. George F. Keiper of Lafayette has been appointed chairman of the National Hospital Day project for Indiana, and it is hoped that every hospital in the state will cooperate and make Indiana 100 percent in the observance of the day. Some suggestions for a program for the day are given herewith: Open house for the inspection of the institution and nurses' home; graduation exercises for nurses; exhibition by x-ray, dietary, laboratory, occupational therapy, social service, and other departments; serving of luncheons to clubs, business men and similar groups; luncheon for public, for which charge is made; distribution of literature and buttons; pageants by nurses, or by children under the direction of some local organization; baby show for infants born in hospital during past two years. Tactful guides should be provided to take visitors through the buildings. Pamphlets describing the various services rendered by the hospital, and giving some facts concerning its work, might be distributed. Special emphasis should be given to the value of nursing as a profession. A general meeting, addressed by some prominent medical or lay man might be planned for the evening, and if the nurses of the institution have a chorus, glee club or orchestra same could be used to advantage. Socially prominent trustees or members of women's auxiliaries might arrange a ball, the proceeds of which could be devoted to some special

work of the hospital. Publicity is a most important factor. Endorsement should be received from the governor of the state, mayor of the city, American Legion, etc., etc., and publicity may be distributed by churches, schools, fraternal organizations, theaters, business organizations, and, last but not least, the press.

Information or advice may be obtained by writing to Dr. George F. Keiper, Lafayette, Indiana, state chairman, or Matthew O. Foley, executive secretary, 537 S. Dearborn Street, Chicago.

MEDICAL POLITICS

It seems strange that almost without exception the members of the regular medical profession overlook the effect of politics in attaining anything for the common good. They do profess to be interested in regulating the practice of medicine, in increasing the standards of medical education, and promoting everything that has to do with public health and sanitation. However, whenever proposed legislation concerning any of these matters is introduced in congress or in any of our state legislatures, how many doctors show any interest in the pending legislation by using their influence in behalf of the legislation or in breaking down opposition? On the other hand, the pseudo-medical cults, including the chiropractors, Christian Scientists, and all other opponents of regular medicine, put up a united front in opposition to every bit of legislation that offers hope of improving public health, medical education and standards for the practice of medicine, or anything else that has to do either directly or remotely with the prevention and cure of disease. It is freely remarked by senators and representatives in congress that a bill having the slightest reference to medical affairs calls forth hundreds and even thousands of telegrams and personal letters from members of the pseudo-medical cults, and scarcely no attention from members of the regular medical profession. Not only do these pseudo-medical cults use their own influence but they get their friends and acquaintances interested to the end that our legislators either in Washington or at the state capitols are led to believe that the sentiment so freely expressed constitutes the prevailing sentiment among constituents, and it is easy to vote that way, irrespective of what the private opinion of the legislator may be. As an instance of this activity, we call attention to the public health bill introduced in congress by Senator Watson, which should have the support of members of the regular medical profession. So far as we can see, the bill has no objectionable features, but it does provide for the appointment of a few medical officers as permanent members of the Public Health Service, and probably some of the pseudo-medical cults would like to feed

at the public crib so they are vigorously opposing the bill and making their sentiments felt by hundreds of telegrams and letters to Senator Watson from Indiana alone. In the meantime less than a dozen members of the regular medical profession of Indiana have written Senator Watson concerning this bill. As has been stated by legislators on more than one occasion, it is difficult to secure much needed medical legislation when doctors are so apathetic concerning it, and so seldom show enough interest even to take the trouble to write or telegraph their legislators concerning their attitude. It is both disappointing and discouraging, and yet doctors howl the loudest because such legislation is not effected. To use an advertising slogan, "There's a reason."

"FAIR PLAY TO THE PUBLIC"

An editorial in a recent issue of the New York *Evening World* commented on an investigation that had been made in New York in an attempt to test the quality of "chiropractic" knowledge. Normal individuals went to certain chiropractors, gave fake symptoms, and the chiropractors "discovered" subluxations whose presence defied the roentgen ray. The *Evening World* very properly pointed out that, possibly, if normal individuals went to reputable medical practitioners and reported fake symptoms, physicians themselves might "fall down" on both diagnosis and treatment. As a result of this comment, the *Evening World* received a number of letters of approbation from the chiropractors, in one of which the writer commended what he termed the paper's "policy of fair play to the chiropractors". The *Evening World* came back with an editorial whose title we reproduce in the caption. This editorial contains so much sound sense that we make no apology for reprinting it practically in full:

The *Evening World* is vastly more interested in a policy of fair play to the public.

Fair play to the public would, we believe, eliminate 90 percent or more of the present practitioners of chiropractic.

Fair play to the public would require adequate education of chiropractors—for example, a regular medical course plus the specialized postgraduate work expected of a specialist in other fields of medicine.

In such a course many would-be chiropractors would come to the conclusion that manipulation of vertebrae is not a cure-all, whatever its possibilities.

Fair play to the public demands that chiropractic processes should be used only by men who know thoroughly what they are doing and why. Both common sense and science deny that all ills are traceable to the spine.

Fair play to the public demands a strict curb on a great mass of quackery masquerading under the name of chiropractic. Fair play to the public would send a substantial percentage of chiropractors either to school or to jail.

Adequate education might develop some competent healers of a limited group of diseases from the crowd

of incompetent meddlers. But, given education, it is probable most of them would cease to be chiropractors.

Jour. A. M. A., April 1, 1922.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service. It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

CERTAINLY there are grave problems confronting the medical profession today and they have to do with the very life of the profession. That these matters may come up for discussion at St. Louis seems very probable, and it is hoped that a constructive program will be adopted.

SOME rare bargains in instruments or surgical supplies oftentimes are offered in our advertising pages, to say nothing of announcements that are of interest to members of the medical profession. Probably our readers do scan the advertising pages but if not it will pay them to do so.

ACCORDING to the United States Census there have been very few deaths from smallpox in recent years, and the Census Department attributes this decrease to vaccination. In evidence of this, it is pointed out that the unvaccinated population is the one that suffers most from smallpox. Just how the antivaccination society is going to get around these government statistics is a question, but probably in answering they will use the slogan started by *The Journal of the A. M. A.*, "Figures don't lie, but figurers do".

How many medical men are going to exert their influence at the primaries in having suitable candidates for the legislature selected? How many medical men realize that only a little work in the selection of candidates does away with the necessity of a whole lot of work later on in the legislature in trying to offset the pernicious influence of legislators who never should have been permitted to come up for election? This is a matter for serious consideration, but

with the characteristic indifference of medical men we doubt if it will receive a second thought.

OUR State Association has a substantial bank account and is able to provide funds for any enterprise that is of direct value to the medical profession of the State. We are interested in wise medical legislation for the protection of the public as well as for the general advancement of medical science, and the Association has made provisions for funds that can be used in securing such legislation. Why wait until the legislature convenes before using some of that money? Why not begin the political work at the primaries or even before that? A dollar spent in political work sixty days ago would be worth one hundred and perhaps a thousand dollars when the legislature is in session. "Penny wise and pound foolish" certainly applies to politics as well as anything else, and this whole question of medical legislation is a matter of politics.

THE State of Florida, under the direction of Health Officer Dr. Raymond C. Turck, has established a public radium clinic for the treatment of cancer. In announcing the establishment and aim of this clinic Dr. Turck makes the following statement: "The patient applying for free treatment must be financially unable to pay for any medical services which may be required. Patients who are in moderate circumstances and yet able to make some payment for medical services are *not* eligible for this treatment. It is not the intention of the State Board of Health to enter into competition with private physicians in the treatment of disease." If all public clinics could be established and maintained on that basis there would be an end to this matter of pauperizing the people, and the deserving poor would receive proper medical and surgical services.

THIS year's session of the A. M. A. will be held at St. Louis, May 22-26. It is fortunate that a little earlier date than usual has been selected, for St. Louis is one of the hottest and most uncomfortable places during the time that the A. M. A. ordinarily holds its annual sessions. In May it ought to be fairly comfortable, with none of the hot sticky days that make life unbearable. From all indications there will be an enormous attendance. As usual the programs offer a scientific treat that is attractive, and of course the usual "get-together" and social spirit is a great drawing card. Aside from this there probably will be some interest in the storm that is brewing in medical circles everywhere concerning the tendency toward various forms of socialistic or communistic medicine proposed or innocently supported by some of the leaders of the medical profession.

DR. ALLEN K. KRAUSE, of Johns Hopkins University, recently has called attention to the dangers resulting from promiscuous spitting on the streets and in public places, particularly affecting children who play on the streets, and whose marbles, balls, and other toys are contaminated by sputum. Also, both children and adults have their shoes soiled with such sputum and carry it into the home. It has been said by some of the greatest public health authorities, and by the foremost students of the subject of tuberculosis, that if it were possible to suppress spitting in public places, it would at once effect a very considerable diminution in the prevalence of tuberculosis, pneumonia, diphtheria, whooping-cough and other diseases which are transmitted through respiratory tract discharges. One needs but to glance around on the street or in various public buildings and stairways to note the evidence of promiscuous expectoration and to realize the need of an anti-spitting campaign in Indiana cities and towns.

SENATOR WATSON of Indiana has introduced in the United States Senate a bill to reorganize and to promote the efficiency of the United States Public Health Service. The real object of the bill is not only to provide adequate medical and surgical care for the beneficiaries of the United States Veterans Bureau, and increase the efficiency of the Public Health Service, but also is intended to do away with the temporary commissions in the Public Health Service which are unsatisfactory from every standpoint and are not conducive to efficiency. The Service really needs the addition of 450 medical officers, 50 dental officers, and 50 non-medical but scientific officers, all of whom have been provided for in the bill introduced by Senator Watson. No increase in appropriations is provided, for the reason that no increase will be necessary. The bill simply effects a reorganization of the Public Health Service to meet current needs. As might be expected, the principal opposition to this bill comes from the pseudo-medical cults, and it is hoped that the members of the regular medical profession will get back of the bill in an effort to put it through and thus increase the efficiency of the Public Health Service.

"The Journal of the Oklahoma State Medical Society, speaking editorially of the training of nurses, holds that a three years' training as a routine requirement is unnecessary.

"There is no good reason why an intelligent woman should be required to give three years of her time in order to master the fundamentals necessary to carry out the orders of the attending physician.

"There is much sentiment of this kind among

members of the medical profession. This sentiment no doubt grows out of the fact of the shortage of nurses who are competent to perform the ordinary duties of caring for patients suffering from general diseases under the direct care of physicians, and on account of the high fees charged which are beyond the reach of a great number of patients. If arrangements could be made which would provide for a one or two years' course of training for intelligent young women and a three years' course for those who desire to prepare themselves for special work, after securing a high school course of preliminary preparation, the public would be much better served than now with a standard three years' course and a large portion of the sick without nurses."—*Journal of the Iowa State Medical Society*, March, 1922.

SOME of our readers may have noticed that some of the life insurance companies, notably the Lincoln Life Insurance Company, makes a practice of sending out questionnaires to all physicians who have attended applicants for insurance, and these questionnaires contain an inquiry concerning the nature of the diseases for which the insurance applicant has been treated, and an opinion as to the effect of such diseases upon the insurance risk. In every instance the giving of this information is classed as a courtesy to the insurance company, but, as usual with insurance companies, no compensation is offered or granted for the time, effort and opinion given, which is purely for the protection of the insurance company. Oftentimes the furnishing of the information requested means looking up old records and furnishing technical advice concerning a patient who has not even paid his bills for professional attention. Even if the bill for professional services has been paid, there the obligation ends, and the attending physician owes nothing more to patient and he certainly owes nothing to the insurance company which, in reality, is the one that profits and is protected by the information furnished. We suggest that the best way to deal with these questionnaires is to throw them in the wastebasket.

From the *Indianapolis Star*, of Thursday, March 23, we clip the following:

HEALTH OFFICER KEEPS SWINE IN TOWN

Fort Branch, Ind., March 22.—Dr. Shalev, health officer here, and four other men were arrested for violating an ordinance passed recently by the town council, prohibiting the keeping of hogs within the corporate limits of the town. When the ordinance was presented many citizens opposed it, including Dr. Shalev.

The health officer and four other accused men appeared in justice's court here today. Their case was tried before a jury, which failed to reach an agreement.

Dr. Shalev, as witness in his own defense, de-

clared that hogs kept within the corporate limits of a town or city are not a menace to health, but are a benefit in that they act as scavengers to keep the streets and premises clean.

If we can place credence in this report, Fort Branch is to be pitied for having a health officer who has such a queer conception of the recognized rules of health and sanitation. Furthermore, it is exceedingly unfortunate that a certain amount of odium attaches to the medical profession because one of its members assumes an attitude so diametrically opposed to all of the teachings of sanitary science which the medical profession upholds. Another phase of the situation is the queer turn of politics which permits or tolerates the appointment of a health officer who is so little in sympathy with the aims and objects of public health work.

"GET WELL IN INDIANA" was the subject of the presidential address delivered by Dr. Eric Crull before the Indiana Tuberculosis Association at its annual meeting on February 24; and "Get Well in Indiana" is a part of the propaganda of the Indiana Tuberculosis Association which it plans to emphasize during the coming year. The mistaken idea that climate alone will effect a cure in tuberculosis induces many people of Indiana and other central and eastern states to uproot themselves from their surroundings and migrate to western and southwestern states without sufficient funds for adequate care and treatment, expecting to obtain light work to maintain themselves. These western and southwestern states are sending out warnings that work of the desired character is not obtainable, that such states have no funds to be used in the care of these individuals, and that untold suffering will result from financial worry and homesickness. It is a proven fact that tuberculosis can be cured right here in Indiana, Illinois, Ohio, etc., just as in Colorado, New Mexico, and California, without the attending financial burden and the necessity of leaving home and friends. Hence the importance of this "Get Well in Indiana" campaign to be put on by the Indiana Tuberculosis Association. A circular dealing with this subject has been gotten out by the Association, and copies will be sent free upon requests addressed to M. A. Auerbach, Executive Secretary, Indiana Pythian Building, Indianapolis.

WE confess that we have been rather disappointed in not having a functioning committee on Industrial and Civic Relations for the Indiana State Medical Association. There are a great many problems confronting the members of the medical profession which ought to be considered by such a committee and recommendations offered for the guidance of the profession.

In this connection we might mention the question of furnishing so much gratuitous but valuable expert information to insurance companies. The profession ought to adopt a definite policy in handling this matter and then stick to it. Another subject of interest is that pertaining to medical and surgical services rendered in industrial cases where the compensation comes from insurance companies. In a large percentage of these industrial cases the doctor is brow-beaten into accepting niggardly compensation, and always because some insurance company is responsible for the claim and will not pay just compensation unless forced to do so. What the medical profession ought to do is to fix its own fees in these compensation cases and not permit insurance companies to do it for them. Furthermore, every doctor should refuse industrial work except under a guarantee by the employers that a just settlement of the account for services rendered will be made. We might mention a number of economic problems that ought to be considered by our committee on Industrial and Civic Relations but what we have mentioned is quite sufficient for a starter.

THE county secretaries are to be congratulated on the successful efforts which they have made already this year in collecting the dues. We now have 2,450 members, which is an increase over the corresponding time last year. It is, of course, the aim of the organization to maintain this lead throughout the year. Reference to the Councilors' membership contest (in another column) will show that the Sixth District, Dr. Spilman councilor, was the first district to increase its membership over last year. This is explained by the fact that out of the eight counties in Dr. Spilman's district, five of them already have 100 percent membership or better. The two lowest in the contest are the Third District, which has only 85 percent of its quota, and the Tenth District, which has 86 percent. The low showing is in a large part due to Washington and Clark counties in the Third District, and to Lake county in the Tenth District. The standing of the county societies shows that Marion County is in first place with 376 members, one less than last year; Vigo County in second place with 105 members, two more than last year; Allen County in third place with 100 members, seven less than last year; Vanderburgh County in fourth place with 91 members, 7 more than last year; and Lake County in fifth place with 79 members, 16 less than last year. At the bottom of the list stand four county societies with six members each at the present time whose memberships for last year were as follows: Whitley County, 19; Johnson County, 16; Washington County, 13; and Warrick County, 12.

A PLAN is on foot in Washington to permit the use of denatured or "premedicated" alcohol in remedies intended for internal administration. In other words, alcohol used in medicine shall be "premedicated" with one or more of the ingredients used in that medicine, and when it is so premedicated, it shall be free from tax. To the average physician, this may sound reasonable and desirable, but when one learns that it is sponsored by the proprietary medicine interests it immediately becomes evident that the matter deserves further scrutiny. Most of the goods of the proprietary medicine manufacturer are sold at fixed prices per bottle. If he can get his alcohol free, that will mean a great reduction in the cost, and a large increase in his profits. On the other side, the pharmaceutical manufacturer who puts out 500 to 2,000 different alcoholic preparations would have to have as many or nearly as many alcohols as he has preparations, instead of three or four formulas of denatured alcohol; he would have to carry an enormous stock of alcohol on his shelves with the attending large capital investment, with no, or at least very little, reduction in cost to the consumer. Further, such a plan would endanger the official standards of preparations, and make the Pharmacopeia a joke. Then, too, the "premedication" would be done in the distilleries, by the distillers' employees, and not by pharmacists and others trained in the handling of pharmaceutical preparations, and thus the scientific control over the manufacture of these drugs would be lost. Summing it up, it seems quite clear that the only one who would benefit by this proposed plan would be the manufacturer of such preparations as Tanlac, Lydia Pinkham's Compound, Etc. The medical profession of Indiana should make it their business to advise the congressmen from this state concerning the dangerous character of the plan.

IF anyone thought that the chiropractors would confine themselves to the manipulations which they call "adjustments", another guess should be made. At the present time the chiropractors are using x-rays, violet rays, radium, high frequency currents, and anything else that will prove attractive to patients and increase fees. This is not all. Not a few of the chiropractors are beginning to use drugs which they dispense themselves and glibly tell the patients are merely to assist in the main treatment, which is "adjustment". In reality it doesn't make very much difference what the chiropractors do or employ, for their sins of omission are as great as their sins of commission when they attempt to treat all kinds of diseased conditions without possessing adequate educational qualifications. However, it is a sad commentary on the judgment of the public when no recognition of fitness is required of those

who are responsible for caring for human lives. We compel a railroad engineer to be thoroughly qualified by education and experience before being permitted to run a locomotive which pulls a train loaded with human lives, and we make sure, through frequent and repeated examinations, that he continues to maintain his efficiency. However, when it comes to assuming the responsibility of a human life that is jeopardized by disease, we throw away all restrictions, forget all the rules of consistency, and permit the ignorant, untrained and inexperienced pretenders to assume the right to care for human life. As we often have said, we care not what system of medicine is employed to treat the disease, providing it has a rational basis, but we do insist that those who are called upon to treat diseases should know the human body in a very general way in health as well as disease, and that knowledge cannot be acquired by the individual who has less than a common school education and attains his title of "doctor" by either a six weeks' or a six months' course in chiropractic training.

CHURCHES are getting down pretty low when they open their doors to medical pretenders for the expounding of unscientific and irrational theories concerning the cause and treatment of disease, to say nothing of giving over the pulpits to an actual clinical demonstration, and yet this is what has occurred in Elkhart where a Methodist church was given over to the chiropractors. According to the newspaper accounts of the meeting, the chiropractic lecturer said to his audience, "We don't accept the theory of disease germs and micro-organisms. We recognize only two diseases—too much or too little functioning. When nerve centers are impinged the functioning ceases. Relieve the pressure and it functions again." Incidentally, it is reported that he said that we should stop paying taxes for the support of regular medical schools.

We are under the impression ourselves that if education does not count for anything in furnishing enlightenment or in adding to the sum total of knowledge, we ought, in justice to the taxpayers, to close all of our educational institutions and especially those educational institutions which have to do with the teaching of all of the cardinal branches of medicine as developed through several hundreds of years of intensive study and investigation. Ignorance is at a premium just now and the public might as well pay the penalty for following blindly in the steps of ignorance. Chiropractic is the deification of ignorance, and those credulous persons who take up with such an irrational and unscientific practice as that followed by the chiropractors not only deserves but will pay the penalty for such foolishness sooner or later. Perhaps

it would be best to give the chiropractors full swing in order to demonstrate the absurdity of their claims, but in the meantime a lot of innocent people will suffer as a result of being beguiled by the specious arguments put out. However, it is time for a showdown on this educational proposition and if education counts for anything then make the chiropractors become educated. If education does not mean anything, then by all means it is an injustice to the taxpayers to support educational institutions of any kind.

IN this number of *THE JOURNAL* will be found some interesting correspondence relating to the attitude of insurance companies toward the medical profession. The insurance companies impose upon members of the medical profession because it can be done so easily and so acceptably. When we stop to think that the business of life insurance companies is dependent almost wholly upon the skill and judgment of physicians, it seems a little remarkable that due appreciation of this fact should not result in not only decent compensation for services rendered but the display of more courtesy than ordinarily is shown members of the medical profession. Enough evidence can be produced to indicate that the average life insurance company is arrogant and exacting when dealing with doctors, and possesses neither intention nor desire to pay doctors respectable remuneration for the very valuable services rendered. The reason is summed up in the spineless attitude of the medical profession, individually and collectively, in standing up for its rights. By reading the correspondence which we are publishing in this number of *THE JOURNAL* it will be noted that the burden of responsibility is placed upon the physician. In other words, the insurance company expects the doctor to spend his time and energy, to say nothing of giving his expert opinion, all for the protection of the insurance company but without remuneration or any obligation, implied or otherwise, on the part of the insurance company. Proof of death may be obtained from the public records, as has been pointed out in the correspondence, and if there is any question of doubt on the part of the insurance company as to the proofs thus presented it is up to the insurance company to produce the evidence to the contrary. In reality, what the medical profession should do is to refuse to be the submissive tools of insurance companies, and to that end we suggest that the Indiana State Medical Association take some action on the subject. Expert medical evidence concerning insurance contracts primarily is for the protection of insurance companies, and there is no reason why insurance companies should not pay for such information. However, no

matter for whose benefit the expert services rendered, the services should be paid for and not considered a mere courtesy.

THE time has passed for the filing of declarations of those who desire to have their names on the primary election ballots. We doubt if any medical man acting independently or as an officer of the Association has put forth any effort to determine from prospective candidates their attitude concerning medical and public health questions which may come before the next legislature for action. On the other hand, the chiropractors, together with other medical pretenders, have made it a business to secure candidates favorable to their cause, and it is a foregone conclusion that this activity will not cease until such candidates are selected at the primaries and later put into office through election. When the next legislature convenes and a lot of objectionable bills are introduced which threaten to tear down medical education and the laws on our statute books (not enforced) governing requirements for the practice of medicine, a general howl will go up by members of the medical profession as to why the statesmen (?) opposed to medical progress of every form were ever permitted to get into the legislature. It is about time for these howlers to recognize the fact that in this country everything is controlled by politics, and unless we are prepared to get into politics on the ground floor, which means putting up candidates, having them selected at the primaries and after that elected, we are not going to stem the tide of adverse legislation which is proposed and carried into effect by the medical pretenders. The whole attitude of the medical profession is one of "Let George do it". No one seems to want to take the initiative, and whoever is asked to do something feels that he is being imposed upon and promptly shirks responsibility, forgetting that someone must work for the common good. Generally speaking it is the younger men who should be most interested in furthering the aims and objects of the medical profession, and incidentally they are the ones that not only have the most time to devote to the matter but are the most energetic and resourceful. The older and the busier men in the medical profession should give advice as well as financial assistance, but all should contribute to the general cause in some way and until medical men do interest themselves in politics in this way they are not going to accomplish anything beneficial to themselves or the common good. In fact, the prospects are encouraging for the abolition of much of the medical legislation that primarily is protective for the public and only incidentally protects the regular medical profession.

DEATHS

JOHN P. BLACK, M.D., of Greenfield, died March 23, at the age of 69 years. Dr. Black graduated from the Indiana Medical College of Indianapolis in 1885.

EMMA J. FITCH, M.D., died at her home in Indianapolis, February 27, at the age of forty-four years. Dr. Fitch graduated from the Medical College of Indiana, Indianapolis, in 1901.

WILLIAM W. ZIMMERMAN, M.D., of Richmond, died March 20 at the age of sixty-six years. Dr. Zimmerman graduated from the Pulte Medical College at Cincinnati in 1888.

STEPHEN P. TRACY, M.D., of Walkerton, died March 24, at the St. Joseph Hospital in South Bend at the age of sixty-nine years. Dr. Tracy graduated from the Hahnemann Medical College of Chicago in 1886.

CHARLES W. CONGER, M.D., of Indianapolis, died March 16, at the age of fifty years. Dr. Conger graduated from the Medical College of Indiana, Indianapolis, in 1898. He was a member of the Marion County Medical Society, the Indiana State Medical Association and the American Medical Association.

MILO F. HART, M.D., of Kirklin, died March 16 at the Methodist Hospital in Indianapolis, aged forty years. Dr. Hart was a graduate of the University of Indiana School of Medicine in 1909 and was a member of the Clinton County Medical Society, the Indiana State Medical Association, and the American Medical Association.

ELMER EUGENE MORGAN, M.D., of Fort Wayne, died March 23 at the Lutheran Hospital following a brief illness. Dr. Morgan was sixty years of age. He was counselor for the Twelfth District Medical Society, treasurer of the Allen County Medical Society and was a member of the staff of the Lutheran Hospital. Dr. Morgan graduated from the Rush Medical College of Chicago in 1893 and was a member of the Allen County Medical Society, the Indiana State Medical Association and the American Medical Association.

CHARLES MARVEL, M.D., died March 5 at his home in Richmond, aged fifty-eight years. Dr. Marvel was born in Georgetown, Delaware; graduated in medicine from the Jefferson Medical College of Philadelphia in 1891, and located in Richmond in 1894. For more than twenty-five years Dr. Marvel had been on the surgical

staff of the Pennsylvania Railroad Company. He was a member of the Wayne County Medical Society, the Indiana State Medical Association, the American Medical Association, and a fellow of the American College of Surgeons.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

CONTRACTS have been let for the erection of a hospital at Clinton.

DR. NORMAN R. BYERS, of Bedford, and Miss Rhoda E. Trook, were married March 15.

THE Grant County Medical Society held its regular monthly meeting at Marion, February 28.

DR. C. F. KERCHEVAL, of Greensburg, has gone to Chicago to take a postgraduate course in surgery.

THE Elkhart Medical Society held its regular meeting at Elkhart, March 2. The meeting was well attended.

THE Wayne County Medical Society held its regular monthly meeting at the Arlington Hotel, Richmond, March 2.

THE annual meeting of the Indiana Hospital Association was held in the Claypool Hotel, Indianapolis, April 19.

THE twenty-third annual meeting of the American Proctologic Society will be held at St. Louis, May 22-23.

DR. SAMUEL G. DOWNING has moved from Tipton to Hobbs, Indiana, where he will take up the practice of medicine.

THE Vigo County Medical Society held its regular meeting at Terre Haute, March 14. Dr. George G. Davis, of Chicago, presented a paper.

DR. HERMAN N. BUNDESON has been made Commissioner of Health of Chicago to succeed Dr. John Dill Robertson, who resigned in February.

WORK has been started on the construction of a tuberculosis hospital at the Marion National Sanatorium. The hospital will cost more than \$90,000.

THE LaPorte County Medical Society held a meeting March 10 at Michigan City. A paper on "Focal Infections" was presented by Dr. C. E. Nixon.

THE Huntington County Medical Society held its regular meeting at Huntington, March 7. A paper was presented by Dr. Lucien Smith, of Warren.

THE Wells County Medical Society held a meeting at Bluffton, March 7. Dr. C. L. Blue, of Tocsin, presented a paper on "The Physician of the Future".

THE Jay County Medical Society held a meeting March 9, at Portland. Dr. E. R. Hiatt, of Pennville, presented a paper on "The Laity and Medical Ethics".

DUE to illness, Dr. T. C. Louks, of Terre Haute, has discontinued his practice of medicine in Terre Haute until fall when he hopes to be able to return to his work.

THE Wells County Medical Society held its meeting at Bluffton, February 22. Papers were presented by Drs. E. E. Morgan and W. D. Calvin, both of Fort Wayne.

THE Bartholomew and Jackson County Medical Societies held a joint meeting at Columbus, March 2. Papers were presented by Drs. A. P. Roope and A. M. Kirkpatrick.

DR. FOSTER H. BOWMAN, who has recently returned from New York City, where he took a postgraduate course, has located in Terre Haute for the practice of medicine.

JOHNS HOPKINS UNIVERSITY has received an offer of a gift of three million dollars from an unnamed donor, conditioned on the raising of an additional million by the university.

THE Marion County Medical Society held its regular meeting at Indianapolis, February 28. The principal speaker was Dr. E. C. Rosenow of the Mayo Clinic, Rochester, Minn.

THE regular monthly meeting of the Lawrence County Medical Society was held at Bedford, March 1. Dr. Young, of Louisville, presented the principal address of the meeting.

THE Madison County Medical Society held its meeting at Elwood, March 21. Dr. E. M. Conrad, of Anderson, presented a paper on "Contagious Diseases; Their Cure and Prevention".

SIX million dollars has been given to Johns Hopkins University by the Rockefeller Foundation to be used as an endowment and building fund for the School of Hygiene and Public Health.

THE Daviess County Medical Society held its regular annual meeting at Washington, February 22. Papers were presented by Drs. W. H. Foreman and Walter Pennington, both of Indianapolis.

FOLLOWING the convention of the American Legion in Kansas City, virulent smallpox was reported. It is assumed that a traveler from some distant state brought in an undetected case of the disease.

DR. W. L. MISENER, of Richmond, has returned from Chicago, where he has completed a postgraduate course in surgery. Dr. Misener plans to devote his entire time to the practice of general surgery.

THE Howard County Medical Society held a meeting at Kokomo, March 3. Dr. H. H. Rhorer presented a paper the subject of which was "The Closed Method of Treatment of Infected Abdominal Wounds".

THE University of Cincinnati College of Medicine has received an endowment fund of \$224,000 which insures a gift of \$7,000,000 from the Rockefeller Foundation and \$2,000,000 from the Carnegie Foundation.

DR. C. C. SOURWINE, of Brazil, left March 12th for the East, where he will take up the duties of a major in the regular army. Dr. William Palm, of Harmony, will take care of Dr. Sourwine's practice until his return.

THE Arkansas Medical Society will hold its annual session at Little Rock, May 17-19. This is to be the "homecoming" meeting and it is requested that all doctors formerly of Arkansas, now practicing in other states, make every effort to be present at this meeting.

AFTER twelve years of work in the field of public health work in Tennessee, Dr. Olin West has resigned as Secretary and Executive Officer of the State Board of Health of Tennessee to accept the assignment of Field Secretary of the American Medical Association.

THE anniversary of the birth of Florence Nightingale, May 12, has been set aside as National Hospital Day. National Hospital Day has been made a day on which every hospital may acquaint its local constituency with the workings and aims of the hospital.

THE Rush County Medical Society held its regular meeting March 6, at Rushville. An address was presented by Dr. Leon K. Solomon, head of the medical department of the University of Louisville, Ky., on the subject "New Developments of Treatment by X-Ray".

AT the annual convention in Binghamton, New York state grange favored the plan of Dr. Milton E. Gregg, of Mottville, who proposes that each country community now without a physician erect a home and a small hospital for the use of any physician who will settle there.

A BILL that has been presented to Congress by Representative Hayden forbids either the transportation in interstate commerce or the importation of any peyote or anhalonium or marihuana or cannabis indica or any of its derivatives. Offenders are punishable by imprisonment or fine.

THE Red Cross Societies of Adams, Blackford, Delaware, Grant, Hancock, Henry, Jay, Madison, Miami, Randolph, Wayne and Wells counties held a meeting in Portland, March 8. Dr. Linn A. Tripp, of Greenfield, presented a paper, the subject being "The County Needs in Red Cross Work".

AT the annual meeting of the Association of American Medical Colleges held in Chicago, March 7, the following officers were elected: President, Dr. Charles P. Emerson, Indianapolis, Indiana; vice-president, Dr. Irving S. Cutter, Omaha, Nebraska; secretary-treasurer, Dr. Fred C. Zapffe, Chicago, Illinois.

DURING March the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: The Intra Products Co.—Sterile Suspension Mercury Salicylate in Cacao Butter; Sterile Suspension Mercury Salicylate in Olive Oil. Meadows Oil & Chemical Corp.—Ammonium Ichthyolate-Meadows.

IT is reported that the board of governors of the London Hospital have announced that no more women students will be accepted, due to difficulty in teaching a mixed class. Women students were first admitted to the London Hospital during the war as an experiment, and the authorities announce that the experiment has been a failure.

THE new clinic building at Fort Wayne, to be known as the Duemling Clinic, was formally opened March 26. The building is a large three-story structure and contains the offices of the following doctors: Herman A. Duemling, Howard L. Norris, Charles G. Beall, Juan Rodriguez, William O. McBride, Victor H. Hilgeman, C. C. Grandy, John T. Short, and Margaret S. Grant.

UNDER the new regulation issued by Internal Revenue Commissioner Blair of the Treasury Department, a year's supply of liquor will be available to wholesale druggists. Under the regulation the druggist may procure an amount of liquor equal to ten percent of the value of his drug business sales during the last year, instead of a supply for only a three-month period, as formerly.

THE appropriations of the children's bureau of the Department of Commerce have been increased by an amendment of the Senate from \$80,000 to \$120,000 for the purpose of investigating and reporting on matters pertaining to the welfare of children and child life, and particularly to investigate and report on questions of infant mortality and its causes.

THE annual meeting of the American Society for the Control of Cancer was held February 25, at its new office, 370 Seventh Avenue, New York City. The following officers were elected for 1922: President, Dr. Charles A. Powers; vice-presidents, Drs. Clement Cleveland, M. F. Engman, James Ewing and Edward Reynolds; secretary, Thomas M. Debevoise, and treasurer, Mr. Calvert Brewer.

DR. O. C. BREITENBACH of Columbus, Indiana, will sail May 3d on the Empress of Scotland from Quebec, spending three months abroad visiting the leading clinical centers of Great Britain and the Continent. He will be in attendance at the International Congress of Otology to be held in Paris in July. Dr. Breitenbach will be accompanied by his wife and sister-in-law, Miss Louella Folwy of Evanston, Illinois.

THE Hotel Committee for the St. Louis Session of the American Medical Association has announced that at all large hotels at St. Louis there are one or more large rooms with bath which will accommodate from four to six persons. When several persons are coming from the same community these groups can be consigned to one of the larger hotels if they will room together. Parties who desire to use such rooms should write direct to the chairman of the Committee on Hotels, Dr. Louis H. Behrens, 3525 Pine St., St. Louis.

THE dates for the next two examinations of the National Board of Medical Examiners have been announced as follows: Parts I and II, June 19, 20, 21, 22, and 23, 1922; Parts I and II, September 25, 26, 27, 28, and 29, 1922. Applications for the June examination should be in the Secretary's office not later than May 15, and for the September examination not later than June 1. Application blanks and circulars of information may be had by writing to the Secretary, Dr. J. S. Rodman, 1310 Medical Arts Building, Philadelphia, Pa.

IT has been announced in a statement issued by the public health committee of the New York Academy of Medicine that the experiments of prophylactic inoculation against pneumonia carried out during the period of the war and subsequently have not thus far yielded sufficiently convincing proof of its efficacy to warrant universal application. The experiments have established the fact that the vaccines have some value against three of the fixed bacteriologic types of lobar pneumonia and the vaccinations do no harm. The duration of the immunity, however, probably is not more than five or six months.

THE Muncie Academy of Medicine held a meeting March 17 at the Hotel Roberts, Muncie. Dr. H. Keenon Dunham, of Cincinnati, Ohio, presented a paper on "A Few References to Diagnosis, Prognosis and Treatment of Pulmonary Tuberculosis". The paper was discussed by Drs. Alfred Henry, Indianapolis; E. K. Westhaver, Newcastle; and Weir Miley, of Anderson. At the March 31 meeting of the Academy a paper was presented by Dr. James Wynn, of Indianapolis, the subject of which was "Simple Means of Differentiating Types of Tachycardia; and a Reference to Vital Capacity and Its Prognostic Value in Cardiac Disease".

AT the recent annual meeting of the American Society for the Control of Cancer and the Board of Directors, the following officers for the coming year were elected: President, Dr. Charles A. Powers; vice-presidents, Dr. George E. Armstrong, Dr. Clement Cleveland, Dr. Livingston Farrand, Dr. Rudolph Matas; secretary, Thomas M. Debevoise; treasurer, Dr. Calvert Brewster; honorary vice-president, Sir Arthur Newsholme. The following were added to the Board of Directors: Dr. Charles N. Dowd, Dr. John C. A. Gerster, Mr. Calvert Brewster and Mrs. Samuel Adams Clark, all of New York City. The budget for 1922 is \$60,000, an increase of \$45,000 over last year's budget. Plans were discussed and laid for conducting another "Cancer Week" this year. The membership in the organization at the close of 1921 was 1,821.

THE Committee of Arrangements for the St. Louis Session of the American Medical Association with the cooperation of the St. Louis Convention, Publicity and Tourist Bureau, has made arrangements so that Fellows who so desire can use the Tourist Camp in Forest Park during their stay in St. Louis. This camp accommodates approximately one hundred fifty automobiles. It is equipped with camp stoves, toilet facilities, shower baths, running water and sinks for washing articles of any kind. The camp is located in the western part of Forest Park just off Wells Drive about a quarter of a mile east of Skinker Road. Physicians who wish to camp out during their stay in St. Louis should apply for permits, either directly to Mr. Fred W. Pape, Commissioner of Parks and Recreation, or to the Hotel Committee, Dr. Louis H. Behrens, at 3525 Pine Street, St. Louis.

THE Fort Wayne Medical Laboratory, established in 1905 by Dr. B. W. Rhamy, and one of the pioneer public laboratories in the Middle West, has been incorporated with the following officers and directors: M. F. Porter, Sr., president; A. E. Bulson, Jr., vice-president; M. F. Porter, Jr., secretary; B. W. Rhamy, treasurer and manager; H. O. Bruggeman, L. P. Drayer, D. D. Johnston and I. W. Ditton. The laboratory has greatly enlarged its equipment and the character of its business. Besides being a general diagnostic laboratory equipped for any sort of laboratory examination, it has installed a complete x-ray equipment, including one of the new and powerful twenty-inch x-ray machines for deep therapy, and a complete ultra-violet ray outfit. It also has installed and equipped a laboratory for industrial chemistry for the use of manufacturers, foundries, feed merchants, etc. The laboratory staff includes Dr. B. W. Rhamy, manager and director of the Pathological and Serological Department; Dr. Robert J. Maier, director of X-Ray and Radium Department; and Dr. Paul H. Adams, director of the Industrial and Organic Chemistry Department.

SOCIETY PROCEEDINGS

COUNCILORS' MEMBERSHIP CONTEST

District—Councilor	Number of Counties	1921 Membership	1922 Membership to Date	Percentage
First—Dr. Willis.....	7	176	168	.95
Second—Dr. Schmadel.....	7	149	132	.89
Third—Dr. Leach.....	9	130	111	.85
Fourth—Dr. Osterman.....	10	138	132	.95
Fifth—Dr. Weinstein.....	5	158	149	.94
Sixth—Dr. Spitman.....	8	150	155	1.03
Seventh—Dr. Earp.....	4	425	413	.97
Eighth—Dr. Conrad.....	5	172	152	.89
Ninth—Dr. Moffitt.....	10	253	240	.95
Tenth—Dr. Shanklin.....	5	151	131	.86
Eleventh—Dr. Black.....	6	191	187	.98
Twelfth—Dr. Morgan.....	8	241	234	.97
Thirteenth—Dr. Berteling.....	8	274	246	.90
	92	2608	2450	

ELEVENTH DISTRICT

At the October (1921) meeting of the Eleventh Indiana Councilor District Medical Association, Dr. G. R. Daniels, of Marion, offered the following resolution which is to be voted upon at the coming meeting to be held May 18, 1922:

"To amend the Constitution and By-Laws of Art. 3, Sec. 2, by adding: and any member who may not attend the meetings of any year may withhold paying the dues for such year without forfeiting his membership."

Art. 3, Sec. 2, that the above resolution proposes to amend now reads as follows:

Sec. 2. (Amended October 16, 1919, to read:) The membership of this association shall consist of members in good standing of the county societies composing this district, who have paid annual dues into this association on or before the opening of the annual meeting on the third Thursday in May of any current year of its existence."

MUNCIE ACADEMY OF MEDICINE IN MEMORIAM

DR. CHARLES MARVEL

A comrade in our ranks has fallen. A worthy member and co-worker has answered his last call.

Any eulogy, any words of appreciation of our deceased friend and fellow, are as flowers upon a casket, sensed only to the living. Nothing we may do or say will either help or hurt him now. Nor

"Can honor's voice provoke the silent dust,"

Or flattery soothe the dull, cold ear of death."

The lesson of every good and noble life is a lesson and a heritage for the living. Therefore, it is altogether fitting that we pause, at this time, to appraise a life so full of devotion and service to humanity; and as an inspiration to us to again close ranks and "carry on". Dr. Marvel was a man of high type, whose personality was as pleasing as it was positive and forceful. He was a fine representative of the cultural standards and scientific training of the physician. Although a busy man he found time for those things which contribute to the moral, intellectual and social betterment. Few of our non-resident members were more regular in attendance, and more generously contributed to the success of our meetings.

Therefore, RESOLVED, by the Muncie Academy of Medicine. That in the death of Dr. Marvel we have lost one of our most esteemed members, who stood for the highest and exemplified the best in the profession.

RESOLVED. That we shall hold in grateful memory the warmth of his friendship, the wisdom of his counsel and the loyal support he has given this Academy in its efforts to advance the cause of scientific medicine.

F. G. JACKSON,
W. W. WADSWORTH,
WILL C. MOORE,
Committee.

TIPPECANOE COUNTY

After luncheon on February 28th regular meeting was called to order by President Ruschli. Minutes of previous meeting read and approved without change. Under Report of Committees, the following was submitted:

"The committee as appointed by the President of the Tippecanoe County Medical Society for the consideration of certain irregularities that are at present in existence in our midst, has met and drafted the following resolutions which is presented to the Society for consideration and adoption:

WHEREAS, It is well known that contract lodge, or contract family, practice in any form is contrary

to all ideas of professional ethics; is detrimental to the profession as a whole; and as the ultimate end is conducive of but one condition, namely, inefficient professional service to the patient;

WHEREAS, Recent action of the American Medical Association disapproves of such practice and recommends that local county societies take such action necessary to control and govern such practice;

THEREFORE, BE IT RESOLVED, That the Tippecanoe County Medical Society disapproves of contract lodge or family practice.

COMMITTEE.

Dr. Pyke moved the adoption of the report as read. Seconded by Dr. Romberger. Motion to accept unanimously carried.

Dr. Keiper had the paper of the evening on "Comparative Anatomy of the Eye". Stated his attention first attracted to this subject many years ago when he was asked to examine the eyes of a valuable horse. While he refused to treat horses professionally, still his curiosity caused him to try and examine the eyes, whereupon he soon realized that as compared to the human eye there was a difference in structural anatomy. That soon he began to study the anatomy of all the eyes that his spare time permitted, many of these he sectioned and mounted and after twenty-five years of this work he was prepared to say that he had gained a knowledge through experimentation and study of his own specimens that could not have been acquired by reading the written experience of others.

He gave his processes of preparing specimens and the technique of preparing glycerine jelly for mounting purposes, descriptive of mounting cups used, and how to fill and seal them.

He illustrated his lecture by slides, mountings and books.

The central idea maintained and demonstrated throughout his talk was that the anatomy of the eye of an animal—meaning all life having power of vision—is always suited to its environment. The lantern slides as thrown upon the screen and ably interpreted by the Doctor visualized and illustrated the truth of this statement. The subject matter of the paper bore evidences of years of observations, study and work and opened up new lines of thought, as illustrated by the Doctor when he said in closing, "Will man's flying in the air through the coming years change the anatomical structure of the human eye? This can be answered only by returning one thousand years hence to find out."

Adjourned. Members present, twenty-seven. Visitors, three. W.M. M. RESER, Secretary.

Regular meeting called to order March 28th by President Ruschli. In the absence of Secretary, the minutes of the previous meeting were read by Dr. Griest and approved without change.

A communication relative to a bill introduced by Senator Watson protecting those who are in the Public Health Service was read. Dr. Lairy commented upon the status of those who were in this Service merely under contract and as the intent of this proposed bill was to protect them, he moved that we endorse the bill known as Senate Bill No. 2764, and as individuals write to our Senators and Representatives asking them to support the bill. Seconded by Dr. McMahan and carried. Dr. McMahan moved that the President of this Society be empowered to write to our Senators and Representatives indicating this Society's endorsement of the bill. Sec-onded and carried.

Dr. Hunter announced that at a recent meeting of manufacturers of certain chemicals, as analine dyes and coal tar derivatives, it was requested that

a temporary embargo should be placed against the importation of such chemicals until the home industries in these lines get started because Germany is now ready to dump her products on our market at a price way below what our manufacturers could meet. The embargo now existing will soon terminate at which time protection will cease. A bill is in congress for a new three-year embargo which will probably carry our manufacturers to the time when they can meet the foreign competition.

The paper of the evening was by Dr. Paul Risk (dentist), on "Some Aspects of Malocclusion (teeth misplacements), Its Prevention and Correction". It was a very instructive paper illustrated by lantern slides.

Discussion: DR. LAIRY—Hope to soon have laws favoring medical and dental inspection of school children so as to secure early correction of faults.

DR. CROCKETT—Spoke of the pathology of mouths and the things that can be done to improve the conditions.

Comments were made by Drs. Schreiber, Cheno-with, Romberger, Hunter, Greist and Ruschli. The latter said it was a large field and very important as a phase of preventive medicine.

Adjourned. Members present, eighteen.

CORRESPONDENCE

DOCTORS IMPOSED UPON BY INSURANCE COMPANIES

Indianapolis, Indiana, March 1, 1922.

To the Editor:

I am much interested and in accord with what you say on page 68, issue of February 15, 1922, concerning imposition by insurance companies upon the profession. In line with this I have adopted a custom which I believe is of value in an attempt to correct some of the evils you have discussed.

We are continually bothered by the different types of insurance companies wanting blanks filled out. Some of the blanks contain forty to fifty questions, others less. It is noteworthy that the companies universally lack the courtesy of filling in the name, address, apparent age, sex, color, occupation, etc. That possibly is due to our past indulgences in doing the extra clerical work for the insurance companies, but it does seem to show how secure the companies are in their belief that they can get much for nothing. They, of course, can and do "pass the buck" and throw the blame on our shoulders whenever possible for their own advantage to avoid fulfilling their contract with the policyholder. As a result of this attitude they do not deserve a great deal of consideration. Again, if we fill out their blanks as they wish, and even occasionally drag out a nominal fee, we are having thrust on us a clerical job that to some at least is an unwanted bother.

My remedy for the situation as it is at present has met with universal surprise, "disappointment in me," and scorn from the companies expecting unwarranted consideration at my hands. When a blank comes to me, I call up the company's office, ask for the manager or his equivalent, and tell him to have his clerk or employed physician (poor goof) call me up and ask for the detailed information bearing directly on the condition of the policyholder in question. The clerk of the doctor can then fill in the blanks, and if necessary mail me the blank to sign, enclosing a self-addressed, stamped envelope. If the company's doctor will not do this, then the company must have a clerk who can take dictation in medical terms on the one or two questions involving technical information or opinion of the physician. If, as has been offered me as an excuse, the company has no clerk trained in taking medical dictation, then they should either get one or cut out the questions necessitating one. Such a system as proposed really argues for quicker completion of the red-tape between the contract and its fulfillment by the company, and ought to prevent blame for failure of fulfillment being passed to the physician.

The agencies here, I have an idea, think that I am acting in a very lordly, high handed way; but as a matter of fact they are getting their desired information more quickly and more sympathetically (which is decidedly to their advantage if they but knew) and are yet getting it for "courtesy". I have been impressed with the attitude of mind which expects me

to do something, or habitually grant favors, for nothing—not even good will or "thank you". On top of this, the ability to feel hurt when I offer a more business-like system would be laughable if the attitude toward me was not such a reflection on the business ability and gullibility of my profession as a whole. Some day perhaps we worms may turn, and wise companies will best take care of their own interests by making it as easy as possible for the physician to give information as he sees best for the policyholder, and also by expressing gratitude as common decency should have told them long ago. Does this meet with your approval, or am I too hard on the benevolent companies?

Sincerely yours,
T. B. NOBLE, JR., M.D.

In connection with the subject of imposition practiced upon doctors by insurance companies Dr. Noble has forwarded for publication some interesting correspondence which is as follows:

Indianapolis, March 17, 1922

Dr. Thos. B. Noble, Jr.,
1008 Hume-Mansur Bldg.,
Indianapolis, Ind.

Dear Sir:

I have been advised that the Claimant in connection with the death of E——K—— has experienced some difficulty in having you complete your statement of death in order that they may make claim for some insurance that was carried by the deceased, and I am requesting you on behalf of the relatives of the deceased to please complete the attached form, giving the information as it is required on same, and have the form notarized, and then either mail the form to E——K——, Claimant, or to my office for further action.

Your prompt attention is requested in this matter as the case has been delayed quite a long time pending the receipt of your statement.

Yours truly,
SABADOS, Manager.
—oo—

Indianapolis, Indiana, March 18, 1922.
Metropolitan Life Ins. Co.,
Indianapolis, Ind.

Dear Mr. Sabados:

Let me take the time and trouble to correct some misstatements in your letter of March 17th. I have had several conferences by telephone with members of your Company on the subject of expediting the completion of your contract with the estate of E——K——. It seems to me that you or your Company lack the desire to pay the policy as it exists and as you are compelled to by law and moral obligation. Of course it is possible for you to delay payment as long as you please, using one excuse or another, but I refuse to be made the victim of your "buck passing". Let me call your attention to a few facts.

First:—The data "required" by you are entirely unnecessary in every way as a proof of the death of the policyholder. The death certificate in the State House is held on file for your convenience in hastening the settlement of your policy. The data "required" by you are for the benefit solely of your statistical department:—knowing which, and desiring to get the necessary expert opinion for this department, gratis, you claim that without the "proper" answering of your unscientific, voluminous questions, you cannot pay the claim. Understand, you claim this by inuendo, as you appreciate that a direct statement of such would be false. However, the lie is there with the additional attempt to cover your own indifference by directing a manufactured blame onto me.

Second:—You lack all semblance of courtesy and all sense of appearing to appreciate the courtesies granted you in the past in the manner assumed by you in sending your questionnaire. You do not fill in questions numbered 1, 2, 3, 4, 5, 6, 7, and so on, which have nothing to do with any medical aspects of this policy declaration. These should have been filled out by your clerk in order to help me in identifying the policyholder, if for no other reason.

Third:—You expect me to swear to my statement, "required" by you, before a notary—whom I shall pay, I presume. Is this not impertinence on your part?

Fourth:—You say you are requesting me on behalf of the relatives of the deceased to fill out the declaration in question. "What a whopper" that is. Come clean, and substitute "our statistical department" for "the relatives of the deceased".

May I continue by asking you a question or so directly bearing on your Company's attitude toward its policyholders? Why is it, then, that the Metropolitan Life Insurance Company quibbles at the completion of its contracts, or policies, almost univer-

sally? Heretofore, we have always filled in your questionnaires without outward objection, but in spite of this our patients report that you require an excessive amount of red-tape before you pay. Do you require the same amount before you accept the payment of premiums? I fancy not.

Let me conclude this unsavory duty by outlining the future. As you are well aware, we are not legally concerned or included by any contract made by your Company. Nor are we to have a moral obligation put upon us at your requisition. As I have said, if you care to do your own work, you can get all of the information you can need by consulting the records in the State House and the family members. If you think it worth while or desirable to retain the good will of the medical profession you will make it pleasantly easy for them to GIVE you the information for your statistical department; and you will kindly, and honorably, accept blame for your own sins of negligence and indifference without attempting to let the family assimilate the impression that the fault lies with their doctor.

Finally, in regard to the claim in question:—as I have previously informed you, I will gladly give your doctor, or clerk, a dictation by phone or otherwise answering the questions which I think pertain to death in question. If you wish my signature, either bring or mail me the policy filled in completely, providing the means of return of the policy, or declaration, or what not. Do we understand each other, henceforth?

THOMAS B. NOBLE, JR., M.D.

—oo—

Indianapolis, Indiana, March 25, 1922.

To the Editor:

In continuing the series of communications dealing with insurance companies, may I add this note describing the situation here as it exists in regard to the specific claim of E——K——, deceased, in reference to which I already have written you?

The general manager of the Metropolitan Company here definitely refuses to honor the claim, although he himself is aware of the death of the policyholder and can obtain further proof from the official records. His attitude is that the claim must be based on proper proof of the death, which proof is only supplied by the filling out of the blank by the physician. If I do not fill out the blank, he claims, it will not affect him, as he is not required to pay the claim until I do.

Now it seems to me that the question of what constitutes proper proof of death is not to be arbitrarily settled by the insurance company, even if in the future it should define that definitely in the contracting policy. The agent here seems to worry none at all about consulting the court about this matter, as at all events he could be required to pay no more than the face value of the policy; and, by repeated trips to the courts on different policies, he could of course wear out the pocketbooks of the individuals suing, whereas the company of course has relatively a limitless source of revenue.

I consulted with an eminent lawyer here who has been working for the various companies and is in sympathy with them. His opinion in brief is that: No doctor is required to fill out any blank; the insurance company is not required to pay any claim until he does; the doctor is working for the claimant, not the company in filling out the blanks in question; the proper filling out of the questions is the great prevention of fraud and therefore is a protection for the insurance company; the information secured by the company is of great value to its statistical department; if the company does not consider proof of death absolute without proper filling in of all blanks, a suit will easily establish lawful right to collect on policy, but will be necessary by the attitude of the company. All of which walks us around a circle and leaves us where we started. Although admitting the value to the company of the information secured, Mr. Lawyer does not think that any company is legally obligated to aid the physician in supplying the data. In considering the moral gratitude earned by supplying the data, and moral duty to aid in every way the physician when he supplies data gratis, our lawyer is human and believes that all local offices should be only too willing to meet the physician half way at least.

The crux of this present dilemma is, in my mind, what constitutes absolute proof of death, and is any company to be allowed to remain passively indifferent in securing such proof and yet be entitled to the protection supplied by such proof? Is there any business so important and necessary that it can require unpaid agents, unwilling agents too, to supply its life, protect its very existence, and yet remain indifferent and act hinderingly rather than helpfully? Yet this business pays very high percentages to its agents, not only on initial premiums but upon renewal premiums, so that it is possible for an agent or salesman

to work up a sustaining revenue from renewal subscriptions or premiums and enjoy life without work because you and I keep paying.

Will you kindly suggest some way in which we can get the claimant of the policy of E——K——(her mother who was supported solely by the industry of the deceased and who is without income now) paid the face value of the policy? It is a disgrace to leave this poor old lady in want. Believing that I have done more than I am morally obliged to do, and much more than I am legally obliged, I hesitate to give way entirely to the whim of the local Metropolitan agent, as it would only stack up trouble in the future for me. A good, old-fashioned, perforated hickory paddle would be of great service; but these paternalistic times forbid such indulgences. So will you kindly give me a ray of light?

Sincerely yours,
T. B. NOBLE, JR.

THE TRUTH ABOUT MEDICINES

PROPAGANDA FOR REFORM

ANOTHER REMONSTRANCE AGAINST MERCURY INHALATION.—During the last few years the attention of the medical profession has been directed by clever propagandists to the treatment of syphilis b: procedures which involve the volatilization of mercury-containing mixtures by heat and the inhalation of the resulting volatile products. There is nothing novel in the principles concerned. Inhalations as well as fumigations of mercury have been tested at various times and the procedures have been abandoned because of the uncertain dosage. The Council on Pharmacy and Chemistry has refused to endorse preparations proposed for the treatment of syphilis which depended essentially on the administration of mercury by inhalation (*Spirocide Not Admitted to N. N. R.*). In this decision it is sustained by a re-investigation of the inhalation treatment of syphilis carried out by Cole, Gericke and Sollmann. The investigators point out that the assumption that mercury is more promptly absorbed by the lungs was based on physical misconceptions. In fact, the mercury is condensed on the mucous membranes of the mouth, pharynx and respiratory tract. That in the mouth and pharynx is, for the most part, swallowed; and the absorption then takes place by the gradual conversion of the mercury into soluble compounds. In other words, the administration of mercury compounds by inhalation has no advantage over oral administration. It has the serious disadvantage of indefinite dosage.—(*Jour. A. M. A.*, March 4, 1922, p. 654).

COLLOSOLS (BRITISH COLLOIDS, LTD.).—Collosols is the trade name applied to certain alleged colloidal preparations of drugs made in the Crookes Laboratories by British Colloids, Ltd., London. The Collosols are recommended for external, internal, intramuscular and intravenous administration. A few years ago the Council on Pharmacy and Chemistry investigated the Collosol products and found that some of the specimens contained precipitates and thus they were not colloidal. Commenting on the presence of precipitates, the Council pointed out that if "injected intravenously as directed, death might result, making the physician morally, if not legally, liable". In the cases in which the therapeutic claims for Collosols were examined, the claims were found to be either exceedingly improbable or exaggerated. In the Collosol "literature" there are frequent references to enthusiastic reports by Sir Malcolm Morris, K.C.V.O., F.R.C.S.E. This medical knight seems to have devoted his energies to the exploitation of Collosols and is reported to be one of the directors of the Collosol concern.—(*Jour. A. M. A.*, March 4, 1922, p. 674).

HALE'S EPILEPTIC RELIEF.—According to advertisements in certain cheap weeklies, Hale's Epileptic

Relief is "prescribed by the best New York specialists". These advertisements offer to send a \$1.50 bottle free. Those who answer the advertisement receive a 4 ounce (118.4 cubic centimeter) bottle of a brown liquid and a small package of tablets, also a sample box of Hale's Liver Tablets. The American Medical Association Chemical Laboratory analyzed these preparations, and reported that the preparations give tests for ammonium, sodium, potassium and bromids, and that the bromid content is equivalent to 20.73 gm. of potassium bromid per hundred c.c. The tablets were found to contain emodin bearing (laxative) drugs—possibly aloes.—(*Jour. A. M. A.*, March 4, 1922, p. 672).

MORE MISBRANDED NOSTRUms.—The following preparations have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act: Krause's Phosphorets (Norman Lichty Mfg. Co.), consisting essentially of ferrous carbonate, asafetida and traces of phosphorus and claimed to cure diseases resulting from a shattered nervous system. Binz Bronchi-Lyptus (Edward G. Binz), consisting essentially of a solution containing oils of eucalyptus and peppermint, glycerin, sugar, acacia, alcohol and water, and claimed to be an efficient remedy for croup, whooping cough, sore throat, etc. Dr. Goodwin's Herhal Compound (Dr. F. A. Goodwin), a mixture of plant material containing chiefly senna, fennel, myrrhi and unidentified plant extractives, and sold for diseases of the stomach, liver, kidneys, nerves, bowels, bladder, etc. Dubois Specific Pills (W. J. Baumgartner), consisting essentially of aloes, ferrous sulphate, calcium carbonate and sugar, claimed to be a reliable female tonic, etc. 4-11-44 Capsules and Injection (A. J. Benson), the capsules containing cubeb and copaiba, and the liquid, a solution of zinc sulphate and salt, sold for the treatment of gonorrhœa, etc. Metzger's Catarrh Remedy and Speis Oil (Metzger Mfg. Co.), the first consisting essentially of iodid and mercuric compound, gentian, alcohol and water, and the second consisting essentially of gasoline, oil of eucalyptus, methyl salicylate, menthol, camphor and ether.—(*Jour. A. M. A.*, March 4, 1922, p. 672).

MORE MISBRANDED NOSTRUms.—The following preparations have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act: Blummer's Herb Tea (Lincoln Chemical Works), a mixture of althea, licorice, couchgrass, sage, senna, elder flowers, sassafras, anise, tenuel, melissa, American saffron, German chamomile, dandelion, liverwort and lungwort, sold as a blood purifier, etc. Parry's Vegetable Compound (Parry Medicine Company), consisting of alcohol, olive oil, water and flavoring, and recommended for various diseases. Hall's Catarrh Medicine (F. J. Cheney & Co.), consisting essentially of potassium iodid, plant extractives, cardamom, sugar, alcohol and water. LaDerma Vagiseptic Discs (Palestine Drug Co.), consisting essentially of common salts, a small amount of alum, sugar, starch and talc. Women's Pills (Fitzpatrick Drug Co.), consisting essentially of castile soap, alkaline carbonates, and unidentified plant extractives.—(*Jour. A. M. A.*, March 11, 1922, p. 751).

OUR KNOWLEDGE OF VITAMINS.—It is generally accepted that a well-balanced diet provides the individual with such vitamins as are necessary to maintain growth and nutrition. The *British Medical Journal* in a leading editorial reiterates the statement that an abundant supply of vitamins exists in all fresh vegetables and that a considerable quantity occurs in milk and meat, provided the latter substances are obtained from animals fed on fresh foods. A normal adult living on an ordinary diet containing

a reasonable proportion of fresh vegetables is, therefore, certain of obtaining a plentiful supply of vitamins. Of all the mass of evidence which has accumulated relative to these substances, this fact is the point of greatest importance. It is, however, very unfortunately, the one point which those commercially inclined are unwilling to recognize.—(*Jour. A. M. A.*, March 11, 1922, p. 734).

PULVANE.—In a twelve-page pamphlet, sent out by the Pulvane Laboratories, Inc., Des Moines, Iowa, and purporting to deal with "The Therapy of Pulvane, an Advanced Method for the Treatment of Respiratory Diseases," we are told that Pulvane "was developed in a United States Army General Hospital by officers of the Medical Department". Pulvane is administered by inhalation, at the offices of the Pulvane Laboratories, Inc. Its "discoverer", it is declared, chanced on the method of "introducing into solution and volatilizing a certain germicide, extremely rare in its usage, because of its resistance, heretofore, to attempts to bend it to scientific will". This "rare" medicament is alpha naphthol. But since the discovery of this volatilizing method "three other ingredients of high therapeutic value have been added". It is stated that the "medical directors" will be glad to name every ingredient of Pulvane to any reputable member of the profession. Nothing is said about disclosing the amounts of the ingredients of Pulvane and hence the information offered is no more complete than that furnished for such patent medicines as Peruna. With regard to the claim that Pulvane was "developed in a United States Army General Hospital by officers of the Medical Department," Surgeon-General Ireland of the United States Army announces that the Medical Department of the Army had nothing whatever to do with the matter and that it thoroughly disapproves of the methods of the promoters of the concern.—(*Jour. A. M. A.*, March 11, 1922, p. 750).

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act: Devouia Mineral Water (Devonian Mineral Springs Co.), claimed to be a natural tonic and reconstructor, and to be indicated in chronic indigestion, constipation, rheumatism, etc. Jackson's Home Rheumatism Remedy (Mark H. Jackson), composed of aloes, licorice, cornstarch and Bland's mass, and claimed to be a treatment, remedy and cure for gout, rheumatism, limbago, sciatica and seroflula.—(*Jour. A. M. A.*, March 18, 1922, p. 834).

WARN'S EPILEPSY TREATMENT.—The claims made for this nostrum are similar to those made for Maghee's Epilepsy Treatment, but they are worded more cautiously. While in the case of the Maghee preparation it is claimed that certain effects *will* be produced, the Warn Remedy Co. avers that these effects *should* be produced by the preparation. The A. M. A. Chemical Laboratory reports that Warn's Epilepsy Treatment consists of capsules, each containing approximately 0.06 gm. (1 grain) of phenobarbital (luminal) to which has been added some charcoal and that it differs but slightly (by absence of bismuth subnitrate) from Maghee's Epilepsy Treatment analyzed previously.—(*Jour. A. M. A.*, March 18, 1922, p. 834).

THE FUTURE INDEPENDENCE AND PROGRESS OF AMERICAN MEDICINE IN THE AGE OF CHEMISTRY.—The recent war brought about a realization of how dependent we had been on Germany for our most valuable drugs. However, before the war was over, American manufacturers were making adequate supplies of urgently needed drugs. In their work on war gases chemists had an example of what could be accomplished in an almost incredibly short time, when

facilities for research were provided on a large scale and under conditions allowing of the fullest cooperation of chemists, physicists and physicians. With the close of the war, chemists began to consider to what extent such facilities might bring about American independence in drugs. A committee appointed by the American Chemical Society has now issued a report which elucidates the subject. The report makes it clear that pharmacologic research in German universities and in privately endowed institutes are far ahead of those in the United States. Our schools of medicine and hygiene, the report continues, are largely ignoring the services which pharmacology, in close cooperation with chemists and clinicians, can render to hygiene and preventive medicine. About twenty years ago, Congress established the Hygienic Laboratory of the U. S. Public Health Service; the plan of its organization was unsurpassed by that of any laboratory in the world; but since then Congress has failed to provide for any considerable growth of this laboratory. Enlarged and with adequate support, this laboratory could give the United States the leading place in the world in this great scientific and humanitarian endeavor toward the discovery of new drugs. If better government support of the Hygienic Laboratory cannot be secured, then a privately endowed research institute must be the goal of those who realize the vast benefits which will accrue from the proper type of research in drug therapy.—(*Jour. A. M. A.*, March 18, 1922, p. 806).

THE DEMAND FOR VITAMINS.—Ordinary fresh foods are the simplest, cheapest and richest sources of vitamins, yet vitamin "concentrates" are being "demanded" by the public because shrewd, forward-looking "patent medicine" exploiters are using all the subtle art of modern advertising to convince the public that it is in serious danger of vitamin starvation, and that the only hope lies in buying these alleged concentrates to make up a hypothetic deficiency. Advertising campaigns, such as those of the vitamius constitute a vicious circle; an artificial demand is created and then the manufacturer excuses his business on the ground that he is merely supplying a demand.—(*Jour. A. M. A.*, March 18, 1922, p. 810).

VERATRUM VIRIDE IN PNEUMONIA.—Medical opinion is averse to the routine use of veratrum viride in the treatment of uncomplicated pneumonia. Claims made for the use of veratrum viride are advanced for other drugs, none of which has borne critical investigation. The error on the part of those who make these claims is the result of inadequate control observations. Advocates of veratrum viride, aconite and venesection believe that by the depression of the circulation produced by the treatment, they may lessen the extravasation of blood into the air vesicles and to this degree lessen the involvement of the lungs. The lack of demonstrable success of venesection has led to the discarding of this once almost universally employed mode of treatment of pneumonia. It is unreasonable to expect as much or more from aconite or veratrum than from venesection.—(*Jour. A. M. A.*, March 18, 1922, p. 835).

ALBERT ABRAMS, A.M., M.D., LL.D., F.R.M.S.—Dr. Abrams has published a book on "Spondylotherapy" ("Physio-Therapy of the Spine"). Spondylotherapy is stated to concern itself "only with the excitation of the functional centers of the spinal cord". Between 1912 and 1914 Dr. Abrams gave "clinical courses" on "Spondylotherapy" in various parts of this country. More recently Dr. Abrams had advertised that he gives a "course" in "Spondylotherapy" in San Francisco. In addition to "Spondylotherapy", Dr. Abrams has also evolved what he calls the "Electronic Reactions of Abrams" which

are said to make possible long-distance diagnosis, it being necessary only to send a few drops of blood taken from the patient and allowed to dry on a slide. Dr. Abrams founded and edits "Physico-Clinical Medicine", a quarterly "devoted to the study of the Electronic Reactions of Abrams". What seems to be the outstanding piece of apparatus, devised or invented by Dr. Abrams, of physico-clinical diagnosis and treatment is the "Oscilloclast". All one needs to do, according to Dr. Abrams, is to ascertain the "vibration rate of a drug" and then to substitute the same vibration as produced by the "Oscilloclast". More recently, Dr. Abrams has extended his observations and experiments, using what apparently is a modification of the old-fashioned pith ball suspended by a silk thread from a rubber rod. This device he calls the "Electrobioscope". If there is any scientific foundation for the marvels that Dr. Abrams so picturesquely features, the scientific world has not yet found it out.—(*Jour. A. M. A.*, March 25, 1922, p. 913).

BOOK REVIEWS

THE OPHTHALMIC NURSE. By G. Griffin Lewis, M.D., F.A.C.S. 102 illustrations. Cloth, 176 pages. W. B. Saunders Company, Philadelphia and London.

This little book answers the needs of the ophthalmic nurse and is written to serve as a practical guide for nurses who lack special training in the management of ophthalmic cases. It is written in a very plain, understandable way, and well illustrated. It gives correct ideas regarding the anatomy, physiology and hygiene of the eye, and includes a knowledge that will give sufficient proficiency to enable any intelligent nurse to meet any requirement of the ordinary ophthalmic case.

LESSONS ON TUBERCULOSIS AND CONSUMPTION, by Charles E. Atkinson, M.D. Illustrated. Cloth, 470 pages. Price, \$2.50. Funk & Wagnalls Company, New York and London.

As the title indicates, this is a book for the household showing how to prevent tuberculosis, how to recognize its first symptoms and how to win back health if possible to do so. There are chapters on how the disease is spread, how recognized and how nature heals. There are also chapters pertaining to rest and exercises, the abuse of fresh air and climate, what to eat, and good sound advice concerning treatment and surgical measures. The chapters on climate are especially illuminating as indicating the character of climate to be selected for individual cases. In short the book covers in a comprehensive way the questions concerning every tuberculous patient and is written for popular reading and study.

THE BLIND; Their Condition and the Work Being Done for Them in the United States. By Harry Best, Ph.D. 765 pages. Cloth, \$4.00. The Macmillan Company, New York.

This is a very interesting presentation of the condition of the blind in the United States and what is being done for their welfare. The various chapters take up the discussion of the legal treatment of the blind, their economic condition and cost to the State, as also a discussion of the subject of the prevention of blindness and the relation of blindness to heredity, disease and accidents, as also an extended discussion of the subject of education of blind children with special reference to the use of raised print and libra-

ries for the blind. Special chapters have been devoted to the consideration of industrial establishments for the blind, including the employment of the blind in general occupations. The book concludes with chapters on organizations interested in the blind, and the provisions by the national government for caring for those who were blinded in war. To those who are interested in the problem of how best to care for the blind the book is especially interesting and instructive.

ULTRA VIOLET RAYS IN MODERN DERMATOLOGY. By Ralph Bernstein, M.D., Professor of Dermatology, Hahnemann Medical College, Philadelphia, etc. Illustrated. 162 pages. Cloth. Achey & Gorrecht, Lancaster, Pennsylvania.

In reality, this book reports the results of the clinical experiences of the author with the use of ultra violet radiations in the treatment of the various skin diseases. While the efficacy of ultra violet rays in the practice of dermatology is now thoroughly established, yet the author admits that in some cases the treatment is not as successful as one might desire, and he has no hesitation in drawing deductions therefrom. He is not over-enthusiastic, but gives credit to the ultra violet rays for some rather startling results in those cases where bactericidal action and antipruritic and analgesic effects, as well as its reconstructive effect upon epidermal cells, is desired. No particular attention is given to the bacteriology and pathology of dermatological diseases, and the case histories do not go into detail but summarize the experience in treatment with the ultra violet rays. While many of us may not be inclined to give as much credit to ultra violet rays, yet the recommendations borne out by the case reports open up an interesting field of study and therapeutic use of a relatively new agent.

SUBMUCOUS RESECTION OF THE NASAL SEPTUM, by William Meddaugh Dunning, M.D.; Surgeon, Bronx Eye and Ear Infirmary, New York, etc. Cloth, one hundred pages, \$1.50. Surgery Publishing Company, New York City.

This little book describes the commoner septal deviations and the author's method of correcting the same by submucous resection. The description is comprehensive and is well illustrated. As the author well says, the operation is one of the most important ones in the field of surgery in that it requires great care and skill in its performance, the adoption of methods to avoid serious results, but the end result when the work is performed according to the best technique gives as much satisfaction to the patient as any procedure in the field of operative surgery. Many skillful operators vary to some extent from the plan followed by the author, but no one can go astray by following the suggestions that have been given.

RADIANT ENERGY AND THE OPHTHALMIC LENS, by Frederick Booth. Cloth, 225 pages, 230 illustrations. Price \$2.25. P. Blakiston's Son & Co., Philadelphia.

This little book is a study of the principles of optics and furnishes a grounding in the fundamentals of refraction. The chapters include a brief discussion of the anatomy of the eye, a discussion of the various theories concerning light, including the various rays and color, the mechanics of vision, theories and treatment of refraction of the eye, including

(Continued on Advertising page xx)

The Endocrines, Digestive Ferments, Catgut Ligatures, etc.

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BALTIMORE

(Continued from page 146)

accommodation and conversions, and winds up with chapters concerning the practical application of lenses for correcting vision. These latter chapters cover the use of cycloplegics, methods of testing the vision with lenses, the use of retinoscopy, ophthalmoscopy, fitting of frames and mountings, and rules for transposition of lenses.

THE NEW POCKET MEDICAL FORMULARY, by William Edward Fitch, M.D., formerly lecturer on Surgery, Fordham University, School of Medicine; attending physician to the Vanderbilt Clinic, etc. Thirtieth edition, revised. Cloth, \$2.50. F. A. Davis & Co., Philadelphia, 1921.

This little pocket medical formulary has been compiled from the results obtained from medical men of wide research and ripe experience. It really represents the pet formulæ of not only the author but many medical men of wide experience. The new edition really introduces prescriptions containing the more important recently discovered drugs that have been found useful. The subject matter has been conveniently arranged, the diseases being in alphabetical order so that prescriptions pertaining to any of them may be found readily. There are other additional features like diet lists, table of differential diagnosis, hospital tables, etc., to add to the value of the book.

DISEASES OF THE SKIN, by Richard L. Sutton, M.D., Professor of Diseases of the Skin, University of Kansas School of Medicine, etc. 1132 pages, 969 illustrations with 11 colored plates. Fourth edition, revised and enlarged. Cloth, \$9.50. C. V. Mosby Company, St. Louis.

Like many other fields in medicine, dermatology has made rapid advances during the last few years, and while the author's previous editions of his work on diseases of the skin were considered comprehensive and up to date, yet this last or fourth edition marks a distinct advance by adding all of the late advances. This includes revision of many chapters and the addition of considerable new material. The book also has been made more useful by the addition of a number of new illustrations. Perhaps no treatise on skin diseases devotes more attention to pathology. As in former editions of the work the stress placed upon symptomatology, diagnosis and treatment in the final analysis is what interests the general practitioner. This has been done in a clear and concise manner consistent with comprehensiveness. This latest edition should meet with the same approval that has been given former editions. It is the product of not only a teacher but an experienced clinician, and while he gives his own conclusions he does not hesitate to incorporate the conclusions of others.

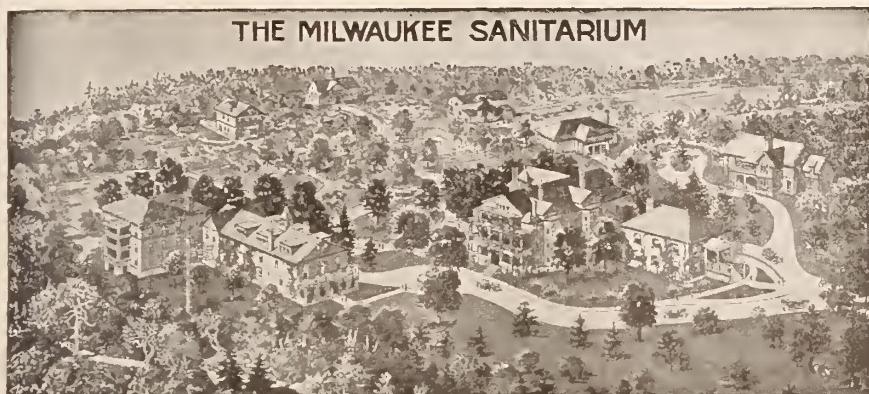
OPTIMISTIC MEDICINE, by A. Fornier Insurance Man. Cloth, 320 pages. \$3.00. F. A. Davis & Company, Philadelphia.

This is a very entertaining book which may be read with profit by every general physician. In reality it is a plea for optimism as a remedial measure in the physician's contact with his patients. It is well known that a cheerful, optimistic physician often works mental miracles with his patients, and he sometimes acquires a greater reputation for skill in the use of drugs than he deserves, inasmuch as the credit belongs to the optimistic atmosphere cre-

ated by the doctor. It is apparent that in every family the utmost of courage, hope and optimism should be brought to bear on the patient to direct his mental attitude in the right direction. The pessimistic doctor should change his business. The optimistic physician cannot rely upon optimism even though that counts for much in the successful handling of his cases, for he must of necessity adopt those medical and surgical measures which the nature of the case demands. In other words, his optimism must be coupled with integrity and professional attainments. He should never resort to the stock in trade of the quack. The author discusses the whole subject from the viewpoint of doctor and patient, from youth to old age, and, in connection with various conditions which call forth the physician's services. Incidents humorous and otherwise enliven the text, and much food for thought will be found in the endeavor to point out the necessity of maintaining an optimistic attitude at all times if a man or woman would preserve a sound mind and a sound body.

DISEASES OF THE SKIN, by Oliver S. Ormsby, M.D., Professor and Head of the Department of Skin and Venereal Diseases, Rush Medical College, etc. Second edition. Octavo of about 1166 pages, illustrated. Philadelphia and New York: Lea & Febiger. Cloth, \$10.00 net.

This is a reconstruction of the former edition and for the distinct purpose of incorporating new material. This new material includes a description of fifteen new diseases and the rewriting of practically all of the balance of the book in order to bring it up to date. A reason for the appreciation that has been accorded this book is that the author has not tried to make it an explanation of his own opinions only, but he has reviewed the dermatological literature with a view of incorporating within the book the recognized opinions of others. These references will serve as a guide to the student who is working up any particular subject. The classification of the previous edition has been followed. The introduction deals mostly with anatomy and physiology of the skin, together with a general consideration of etiology, pathology, diagnosis, prognosis and therapeutics. This is followed by a classification of diseases, which includes hyperemias and inflammations, hemorrhages, hypertrophies, atrophies, pigment anomalies, new growths and neuroses. There are also chapters on parasitic affections, under which is discussed diseases due to both vegetable and animal parasites. The chapters on diseases of the appendages include diseases of sweat glands, sebaceous glands, nails, mucous membranes, the hair and hair follicles. The author emphasizes the importance of a good working knowledge of the microscopic anatomy and of the physiology of the skin. In the chapter on diagnosis a special reference is made to the Wassermann test for syphilis, Noguchi Luetin test for syphilis, tuberculin, Von Pirquet and other tests for tuberculosis, in addition to much other information of value in the general and special examination of the patient. In the consideration of therapy much advanced information concerning radiotherapy, which includes x-rays and radium, phototherapy, vaccine therapy and the technique for treatment with liquid air and solidified carbon dioxide is presented. The author is a well-known clinician and teacher, and the first edition of his book gained deserved popularity, so that this second edition should receive hearty welcome.



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*Owned, Published and Controlled by the Indiana State Medical Association
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Volume XV
Number 5.

FORT WAYNE, IND., MAY 15, 1922

Per Year, \$3.00
Single Copy, 30 Cents

CONTENTS

ORIGINAL ARTICLES

	Page.
Streptococcal Osteomyelitis of the Temporal Bone. Harry Boyd-Snee, South Bend	147
Some Problems in Syphilis. R. V. Hoffman, South Bend	152
What the General Practitioner Can Do In Otology. D. O. Kearby, Indianapolis	155
Sand Bar in the Larynx. Report of a Case—En- doscopic Removal. George F. Keiper, La- fayette	161
A Medical Sermon. Frederick E. Jackson, Indian- apolis	163

EDITORIALS

	Page.
Protein Therapy	169
Prevention Against Diphtheria	169
Death of Dr. Edwin Walker	170
Indiana University School of Medicine Summer Courses	170
Discrimination Against American Physicians in Vienna	171
Detroit Appearance of Lorenz, Wedl & Co.	172
Lessons from Lorenz	173
Editorial Notes	173

(Continued on Advertising Page VIII)

Next Annual Session, Muncie, September 27, 28, 29, 1922. List of Officers and Committees on Adv. Page 2.
Entered as Second Class Matter, January 20, 1908, at the Postoffice at Fort Wayne, Indiana, under Act of
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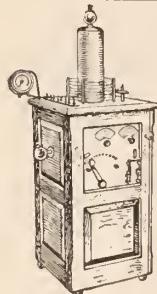
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ALBERT E. BULSON, Jr., B.S., M.D., Editor and Manager

OFFICE OF PUBLICATION: 406 West Berry Street, FORT WAYNE, INDIANA

VOLUME XIV

MAY 15, 1922

NUMBER 11

ORIGINAL ARTICLES

STREPTOCOCCIC OSTEOMYELITIS OF THE TEMPORAL BONE

HARRY BOYD-SNEE, M.D.

SOUTH BEND, INDIANA

What I am about to observe I have recorded in a group of cases numbering in all 266 individuals. The disease being bilateral in 29 made it possible to explore the region in 295 instances. The diagnosis in every case was established by findings in operation and cultures taken from the diseased areas. Further supplementary corroborative autopsy findings were available in 22 cases.

In every case but one, attention was first attracted to the region by the development of an acute otitis media or an acute exacerbation of a chronic otitis media. The otitis supervened in the course of the following acute infectious diseases: Measles, 87; acute naso-pharyngeal infection, 108; acute streptococcic bronchitis, 12; scarletina, 20; streptococcic pneumonia, 15; influenza, 20; epidemic parotitis, 2.

In 136 patients, 24 of whom presented bilateral involvement, we had the opportunity to check the bone findings against the preoperative middle ear findings in 160 instances. In every instance the streptococcus was recovered from the tympanic exudate before the operation and the same organism was again recovered either in pure culture or mixed with other pyogenic organisms from the infected cancellous bone through the operative wound. Supported by these findings I feel justified in making this statement:—that recovery of the streptococcus from the tympanic exudate in the presence of an acute inflammatory reaction in the middle ear is pathognomonic of acute osteomyelitis in the bone beyond the boundaries of the middle ear tract, comprehending the medullary and pneumatic spaces in the petrous and squamous portions as well as the mastoid process of the temporal bone. If this conclusion can be accepted, and it has been established in 100 percent corroborative middle ear and bone findings in this particular group, then the diagnosis will carry

with it everything in the way of complications as they exhibited in the cases. Further let me say that recovery of the streptococcus from the tympanic exudate at once excludes the diagnosis of acute otitis media, *per se*, with its limitations, and also the diagnosis of acute mastoiditis for the same reason, since neither diagnosis comprehends the localities in which the disease has been found to exist. On the other hand the diagnosis of acute streptococcic osteomyelitis of the temporal bone covers the exact pathology found and signifies a regional infection without limitations, and let me add that it is an anticipating diagnosis carrying with it a guarded prognosis for it anticipates any of the complications whether regional or general which exhibited clinically in this group of cases.

The infected region in every case was reached through an operative wound and the pathology uncovered varied with the case and in bilateral operations were not identical. The variations in type will be best understood if I consider the subject in regular sequence as the different elements of the bone suffered through invasion by the streptococcus. Invasion occurred by contiguity or was hemogenous. The immediate effect on the tissues invaded was characterized by the development of an inflammatory reaction involving primarily the vascular structures of the bone. The bone marrow in the medullary spaces and the mucosal lining of the pneumatic cells were the first tissues to suffer in the reaction and the condition was identified by characteristic vascular infiltration of the pneumatic and medullary spaces with granulations bathed in a sero-mucosanguinous exudate. The periosteum participated in the initial reaction in but a few instances, it was distinguished as primary in several of the cases in which otitis media developed as a complication in the course of a scarletina. The dura became primarily involved in two cases, evidence of such involvement being uncovered by autopsy. In this discussion I shall consider periostitis and external pachymeningitis as secondary complications rather than primary manifestations of invasion of the temporal bone by streptococci.

The causal agents in this initial process ap-

pear to have been the streptococcus, as this organism was recovered in pure culture from the infected medullary spaces in every case where the diseased region was reached before suppuration supervened and during the period in which the inflammatory reaction was limited to the vascular structures. The infective micro-organism reached the region in two ways, namely, by direct extension from the adjacent infected tympanic cavity or middle ear tract, or through the infected blood stream.

These are the pathological and bacteriological findings in the cases I have diagnosed acute, uncomplicated streptococcic osteomyelitis of the temporal bone.

Sooner or later the bone itself became involved secondarily, osteitis supervening, as was evidenced by disintegration of the trabeculae and erosion of the denser compact bone. With the development of osteitis the meninges and the periosteum became secondarily involved *per extensionem*. In the event of intracranial extension the neighboring parts in the adjacent region suffered in proportion to the extent and character of the tissues invaded and the following complications developed: External pachymeningitis, perisinusitis, thrombo-sinusitis, leptomeningitis, encephalitis, bulbo-myelitis and encephalo-myelitis. Direct intracranial extension occurred clinically in 30 individuals, involvement manifesting itself as follows: Perisinusitis, 17; thrombo-phlebitis of the sigmoid sinus, 5; thrombo-phlebitis of the superior petrosal sinus, 1; temporo-sphenoidal abscess, 5; cerebellar abscess, 1; extradural abscess in middle fossa, 4; and streptococcic leptomeningitis, 21. Streptococcus was recovered in every instance. On the other hand when extension developed extracranially the complications varied according to the locality and the tissues invaded and are recorded as periostitis, dermatitis infectiosa, myositis, thrombo-phlebitis and lymphadenitis; exhibiting clinically as parietal abscess 1, subtemporal abscess 2, cervical abscess 3, facial paralysis 4, and erysipelas 14. The labyrinth had escaped in every instance.

The foregoing comprehends the regional complications which developed through direct extension of the inflammatory process from the primary focus of infection in the temporal bone.

Through the blood stream remote organs and tissues suffered from metastases and from endotoxicosis and bacteremia, manifesting as metastatic abscesses, arthritis, optic neuritis, nephritis, pleuritis, endocarditis, myocarditis, cellulitis and general diffuse erythematous dermatitis. These complications are proof that bacterial toxins and bacteria as well as infected emboli from the primary focus gained access to the lymph and blood vessels and entered the general circulation.

The causal agents were found to be the streptococcus in mixed strains or the streptococcus mixed with other pyogenic cocci (staphylococci and pneumococci) or bacilli (pyocyaneus, influenza and diphtheroids).

What has been said sets forth the pathological and bacteriological findings in the cases of this group which I designate acute, complicated, suppurative streptococcic osteomyelitis of the temporal bone.

The clinical picture of acute, uncomplicated streptococcic osteomyelitis of the temporal bone may be said to be that of acute, suppurative otitis media and there is no variation. The symptomatology in acute, complicated streptococcic osteomyelitis of the temporal bone is variable and will coincide with whatever complication, single or multiple, which supervenes. In these cases of mixed infection, general and local symptoms appear in regular order as extension progresses. The time when we may expect to observe external localized evidence of disease like sagging of the postero-superior meatal wall or to elicit tenderness on pressure over the mastoid or antral regions is only after osteitis has supervened and the periosteum has become secondarily involved; likewise symptoms indicative of meningeal irritation appear when the inner plate suffers erosion with coincident dural involvement.

The classical symptomatology of acute, suppurative mastoiditis is no guide in the diagnosis of this atypical phenomenon; there need be no sagging, no tenderness on pressure, no elevation of temperature, no change in the structures over the mastoid, leucocytosis is a variable incident, and yet whenever the streptococcus has been demonstrated in the course of an acute, suppurative otitis media even if subsequently other organisms have submerged that bacterium and even if complete resolution as far as the middle ear is concerned has been established, nevertheless a focal infection still exists beyond this area in the bone marrow or in the mucosal lining of the pneumatic cells in the temporal bone.

The findings in roentgenograms were variable, they were reliable and corroborative only in the cases of the suppurative type of the disease but were not so valuable in a diagnostic way if the plates were taken before the period characterized by suppuration and coincident bone destruction.

Mortality:—In 24 the termination was fatal and in 22 autopsy was done. The causes of death were found to be: Pneumonia, 2; metastatic septicopyemia, 1; streptococcic leptomeningitis, 21; the latter complicated with cerebral abscess, 5; with cerebellar abscess, 1; with sigmoid sinus thrombosis, 5; with superior petrosal sinus thrombosis, 1.

Great importance attaches to the method by

which specimens are recovered from the middle ear and I wish to say that the customary practice of recovering the specimen on a sterile cotton tipped swab which has been dipped into the external auditory canal when it is filled or partially filled with blood, serous exudate or pus proved to be faulty technic; many of the swabs inoculated in this manner were reported contaminated or negative and had to be discarded. The best results in my experience have followed when the canal is first cleared of any blood or exudate and followed by thorough cleansing with saline solution and alcohol, after which it is dried with sterile cotton, such preparation reduces to the minimum the chances for contamination; after this preparation we use a sterile Siegel otoscope to induce a negative pressure in the canal and in this manner aspirate through the opening in the tympanic membrane a bead-like droplet which does not overrun and pass onto the floor of the canal. The otoscope is removed and through a sterile speculum it is an easy matter to recover the droplet on a very fine sterile cotton tipped applicator. In cases of secondary mixed infection it is not uncommon to have the specimen reported as negative for streptococcus, and the reason is that the secondary infecting organism like *staphylococcus albus* will oftentimes submerge the primary infecting streptococcus and the latter organism will remain hidden until the secondary infection has cleared in the middle ear tract, after which it may be recovered. I have seen several competent otologists misled and follow cases of this character through to what they interpreted as a complete recovery from an uncomplicated, acute, suppurative otitis media and discharge them as cured, only to have a recurrence of the disease manifest itself in a variable period after apparent recovery. Nine cases of this character are included in this group.

The records show that in our military service 40 percent of the cases developed in the course of, or were noted to have developed at a period subsequent to an acute, streptococcic naso-pharyngeal infection. This percentage obtained in the face of two epidemics of measles, an epidemic of scarletina and the influenza epidemic and covers the period from November, 1917, to March, 1919. In civil practice this percentage is still greater, we will find it to be 61 percent in the cases recorded from March, 1919, to date. Confronted by this remarkable showing of the status of acute streptococcic naso-pharyngeal infection in relation to a disease which I have chosen to interpret as acute streptococcic osteomyelitis I feel justified in making this observation. An acute otitis media supervening as a complication in the course of an acute streptococcic naso-pharyngeal infection imposes on the otologist the responsibility to positively exclude

the streptococcus as the possible causative agent of the ear complication, wherefore it is good practice to determine by culture the absence or presence of the streptococcus organism in every case presenting acute naso-pharyngeal infection, since this the streptococcus organism is the differentiating factor between acute otitis media and acute streptococcic osteomyelitis of the temporal bone.

CONCLUSIONS

1. Streptococcic osteomyelitis of the temporal bone is a clinical entity and is to be diagnosed as such.
2. The etiological factor is the streptococcus organism, it may be of any type.
3. Recovery of the streptococcus organism from the tympanic exudate in a supposed case of acute otitis media is sufficient evidence to support the diagnosis.

DISCUSSION

DR. O. C. BREITENBACH (Columbus): Just a few words with reference to regional bacteriology. We are accustomed to associate with any inflammatory reaction of the middle ear the streptococcus of several types—the pneumococcus, the staphylococcus albus and aureus, diphtheroids, Pfeiffer's bacillus, and also, but in minor role, the bacillus proteus and the bacillus pyocyaneus. Some controversy exists at the present regarding the identity of the streptococcus mucosus capsulatus, some authors accepting it as identical with type three, pneumococcus. This discussion does not minimize the importance of this organism as an otologic offender. Suepflé some few years ago made a very careful analysis of several hundred cases of mastoiditis with especial reference to the bacteriological findings and took a firm stand in his assertion that *staphylococcus* infection was never a factor in the development of intracranial complications. Kerrison referring to the findings of this very able investigator asserts that this view is extreme and therefore incorrect, but that it serves to emphasize the infrequency of intracranial disease secondary to *staphylococcus* infection. He cites as a corollary that the streptococcus on the other hand is unquestionably responsible for a majority of cases of intracranial disease of otitic origin. The same author concludes by saying that even though we were to accept the conclusions of Suepflé as in the main correct, one must yet acknowledge that one cannot prognosticate from the micro-organism found in the tympanic discharge, the future course and severity of aural disease. This being determined quite as much by the patient's systemic condition.

And as a matter of fact we meet clinically with cases presenting an exceedingly severe type of inflammation and with extensive complicating pathology in which the *staphylococcus* is

the attacking organism and also with a very mild type of acute otitis media resulting from a streptococcal invasion of the middle ear. We must in every individual case not alone reckon with the virulence of the invading organism but also with the factors that determine vital resistance in the patient. I would hesitate to make the diagnosis of an acute uncomplicated osteomyelitis of the temporal bone on the finding of streptococci in the case of an acute otitis media, and I would think it presumptive to make the diagnosis of an acute complicated osteomyelitis of the temporal bone because of the evidence of a streptococcus infection demonstrated by smear in the case of an acute suppurative otitis media.

I accept as very radical the deductions of the essayist as it pertains to the findings of the streptococcus in smears from the middle ear. It is not necessary to try to explain away the virulence of streptococcal infection in middle ear infections in camps at the time of our last pandemic of influenza. Time will not permit the citation of factors that undermined the vital resistance of troops as a result of which a very high virulence was attained by invading organisms. Streptococcal pneumonia, therefore, was associated with an incidence of empyema that was startling. With an avidity for pericardial infection by this same organism, aspiration of the pericardium resolved itself into a routine proposition in many cases. And as we find more destructive pathology in other fields of medicine and surgery because of increased virulence of the infecting organism and lowered vital resistance in the individual, so in our otologic cases we suddenly were beset with a most acute symptomatology, sometimes baffling in the light of the secondary pathology *per extensionem* so graphically brought to our attention by the essayist.

I am inclined to look upon infectious osteomyelitis, and I believe authorities will bear me out, as an acute inflammation of bone due to the infection of bone marrow by pus organisms. The basic pathology is much like that seen in the furuncle and has been referred to as "bone furunculosis", although the process in the bone naturally undergoes modification because of the histology of bone determining a slightly different course from that of soft tissue. In the vast majority of cases the organism is the staphylococcus pyogenes aureus. In a few cases it is the streptococcus. The consensus of opinion favors the viewpoint that the streptococcus has a predilection for superficial infection of bone, producing therefore not a diffuse osteomyelitis but rather a primary periostitis.

Pathology of mastoiditis, as we have recognized it in the patient, centers itself in defective drainage following infection of the middle ear. There ensues the picture of an acute exudate

associated with a leucocyte infiltration, the vessels become congested, the mucosal epiderm shows evidence of disintegration. The periosteum covering the bone depending upon it for nutrition becomes carious or the arteries in the mucosa become thrombosed and the blood supply is thus cut off from the membrane and periosteum as well as from the bone. Caries of the tegmen tympani and antri may readily carry infection *per extensionem* into contiguous structures. The question therefore presents itself, in what respect do the findings in acute osteomyelitis of the temporal bone differ from the picture of thrombophlebitis and the resultant osseous necrosis that we have all met clinically in the more destructive types of mastoiditis?

DR. ALBERT E. BULSON, JR. (Fort Wayne): The author of the paper is to be commended for the very careful way in which he has investigated his subject. However, I feel very much like Dr. Breitenbach does concerning the acceptance of all of the conclusions offered. We know that the extension of the infection depends not only upon the resisting power of the tissues but also as to whether the blood stream has been contaminated. So far as involvement of the temple bone is concerned, we all know that the anatomic peculiarities have a great deal to do with the possibility of extension of infection from the middle ear, and this is wholly aside from the nature of the infection. Sometimes the infection passes directly from the middle ear cavity to the antrum, but in other cases it meets with resistance through an obstruction in the *aditus ad antrum*. It is in this latter class of cases that it is quite possible for the infection to reach the temporal bone by means of the blood stream, but of course it can reach other parts equally as well. I am not prepared to accept the statement that in the presence of a streptococcus infection in the middle ear cavity there is always a blood stream infection, or that there is always involvement of the mastoid antrum and contiguous structures. Statistics show and I am sure that many of us have had cases in which the infection was of the streptococcus variety and yet those cases have gone on to recovery without operation. I confess that I always look upon a streptococcus infection as being a dangerous proposition, knowing that complications are more prone to occur than in any other infection. However, by carefully watching the progress of the case, including local manifestations, temperature, and blood count, we often may avoid operative interference. This does not argue that in a large percentage of cases there may be a blood stream infection. It merely argues that we are justified in being careful in resorting to heroic treatment. Of paramount importance is early and a wide incision of the drum membrane, absolute rest of

the patient, and watchful but intelligent waiting on the part of the surgeon with the intention of instituting operative procedures at the first positive indication of extension of the trouble.

DR. W. S. TOMLIN (Indianapolis): The Doctor has arrived at conclusions which I am inclined to think are very dependable as applied to the kind of cases which he has treated. However, I do not believe that it is quite proper for us to undertake to apply these conclusions in private practice. They do call our attention to a very important class of cases which may occur in private practice, and they should put us constantly upon our guard in cases of streptococcus infections.

I have observed the small and very restricted class of this acute streptococcus infection occurring in a family, in a school, or in an institution, and when you find a case of infection of the middle ear which follows the course to operation, and another case develops in the same household or school, you may reasonably expect it will follow about the same course. It comes back to the same point that has been developed—that the streptococcus is a species, and within that species we have types, and when you have a virulence in one case that has been contracted from another, the virulence may be quite similar.

This paper should keep us on our guard not to say that every case that shows an acute streptococcus infection should be operated without waiting. I think we should place ourselves in the position of the patient. If you had an acute streptococcus infection would you be willing to be operated within forty-eight or seventy-two hours, or within a few days' time, when there was nothing of a severe feature showing up? I think that is a point to be borne in mind.

DR. C. NORMAN HOWARD (Warsaw): I would like to emphasize the point of streptococcus infection entering the blood stream.

There comes to my mind the case of a patient who had a suppurative otitis media, left, with extension into the mastoid. The laboratory findings showed it to be a streptococcus hemolyticus infection. We operated and found pus around the antrum, in the tip of the mastoid and in the region of the lateral sinus. The sinus was uncovered. No thrombus was found.

During that week the right knee became painful and swollen and was aspirated. The hemolyticus streptococcus was found again in the knee. The right shoulder became slightly painful and swollen, but was not aspirated. The patient recovered without involvement of further structures by this streptococcic infection.

DR. HARRY BOYD-SNEE (closing): To cover one phase of the discussion let me point out that the middle ear tract is laid down early in fetal life, in the sixth month it can be identified

as an anatomical entity and at birth the bony bounding walls are complete and are formed by fusion and folding of the pars squama and pars petrosa. The tract comprises the eustachian canal, the tympanic cavity and the antrum. The middle ear tract has a mucous membrane lining that is uninterrupted and continuous from the nasopharyngeal opening of the eustachian tube to the posterior wall of the antrum, and this lining membrane functions as a periosteum to the bony walls, and it derives its blood supply from branches given off the neighboring arteries. Intracranially the dura is applied to the inner plates of the squama and the petrosa and likewise functions as a periosteum to those structures. The vessels from the dura as well as those from the lining mucous membrane permeate the intervening cancellous bony structures and anastomose freely in the situation of the pneumatic and medullary spaces. In the medullary spaces we find the red marrow.

In every case in this large group, excepting one, the initial clinical manifestation of infection in the region was evidenced by the development of an acute inflammatory reaction in the lining mucous membrane of the middle ear tract and was recorded as an acute otitis media, the causal agents recovered by culture from the tympanic exudate was found to be the streptococcus. The gross pathology uncovered through operative wounds was characteristic vascular infiltration of the pneumatic and medullary spaces, with granulations and exudate; histo-pathological findings in the material removed were reported as showing round cell and leucocyte infiltration, thrombosis in the venules could be identified in specimens recovered in early operation before fibrosis and osteitis appeared as factors; cultures from the different areas explored invariably showed streptococci. On the foregoing anatomico-pathological and the bacteriological observations the specific diagnosis rests.

It has been impossible to estimate exactly the proportion of the cases in this group which should be classed as hematogenous infections that are to be distinguished from those cases in which the complication developed by contiguity in the course of an acute streptococcic nasopharyngeal infection. I can safely state that the greater number developed by direct extension from the nasopharynx. Clinical experience and autopsy findings will support this assertion.

In all the material utilized in this work the streptococcus organism has been identified as a Gram positive diplococcus recovered from cultures from which the pneumococcus has been excluded by test. It has typed variously as streptococcus mucosus capsulatus, streptococcus viridans, streptococcus pyogenes, streptococcus hemolyticus and streptococcus nonhemolyticus.

SOME PROBLEMS IN SYPHILIS*

R. V. HOFFMAN, M.D.

SOUTH BEND

The economic and social importance of syphilis is indisputable. It seems fair to state that the great majority of physicians appreciate their responsibility and obligation in this paramount issue of public health. But, as in most committees whose members are many, few participants take unto themselves the obligation of doing all of which they may be capable. One might state that every physician shares three great responsibilities: firstly, that to his fellow man; secondly, his duty to the advancement of medical science; and thirdly, his obligation to the insuring of his own success. The great prevalence of syphilis emphasizes the importance of the first and foremost obligation, that to his fellow men. Some time ago in attempting to determine the prevalence of syphilis in the United States, I consulted eighteen treatises written by nationally recognized authorities. Five placed the incidence of syphilis at 6 percent; three at 8 percent; three at 10 percent; two at 10 to 12 percent; and three upwards of 13 percent. The clinician whose estimate was 6 percent obtained his figures from a hospital clientele derived from the so-called "middle classes". The estimates above 13 percent were made in the poorer section hospitals, a considerable proportion of whose patronage was derived from the colored race whose rate incidence is probably double that of the white people. By taking into consideration the obtaining rates of incidence appropriate to each race and sex, and applying the rates in their relative ratios as indicated in the 1920 U. S. census, I have estimated that some 8,700,000 men, women and children of the United States have syphilis in some form. That is equivalent to approximately 8 percent of our entire population. Obviously these figures will not apply accurately to any single group of people, as the ratio refers only to the general average of many groups. However, I feel that one may conservatively consider that one person out of every twelve bears some form of syphilitic infection.

Our second great duty is the advancement of medical science in a manner that best conserves the health of the nation. To a considerable extent that may be done by lending our every effort to educate the public to the importance of demanding accurate diagnosis and adequate treatment. This may be accomplished by the profession's assistance for informing the public by means of press and other media of dissemination. Of equal and possibly more importance is our duty to prepare to render to the public

the type of treatment which we advocate. If in our private practices we diagnose no more than one case of syphilis in every fifty patients examined, is it not probable that many luetic infections are being missed? The universal employment of routine Wassermann tests is neither practical nor necessary. The so-called "busy practitioner" can require every patient to strip to the waist, and routinely examine the eyes for the pupillary reflex and iritic adhesions; (2) the skin for lesions of undetermined etiology; (3) cervical and epitrochlear glands for enlargement; (4) the aortic valve and arch for murmurs; and (5) knee jerks. (The genitalia should be included if the history of genital lesions is obtained.) Such a routine may be satisfactorily carried out in two minutes. If the aforementioned regions appear normal, seldom will syphilitic infections be overlooked.

The Wassermann reaction is insufficient evidence for the determination of syphilis, in the absence of supporting clinical signs. Nevertheless it is advisable to treat many patients, where blood sera is "weakly positive", for the purpose of determining the etiology of the case—as indicated by the serologic response to antiluetic therapy. The Sachs—Georgi, Hecht—Gradwohl and other substitute tests are inferior to the Wassermann test. The principal claim made for the substitute tests is their faculty of detecting "weakly positive" serum reactions. The pseudo-positive reactions are frequently not apparently caused by syphilis, and they serve to obscure the diagnosis of the actual cause. The cholesterolized antigen is of value in determining the point beyond which intensive treatment may be discontinued. The luetin test is so unreliable that it should be discarded.

The third obligation, that of investing our efforts in tasks whose results are commensurate with our labor, may be discharged to an unusual degree of satisfaction in the treatment of syphilis. Despite the fact that no anti-luetic drugs of great value have been discovered since the advent of the arsphenamines, our efficiency in employing those drugs has been much increased. But we yet have much to learn concerning the efficient use of the drugs now available. Our therapeutic goal lies in the determination of the ratio of the maximum tolerated dose to the curative dose. The present standard dose—0.9 decigrams of neoarsphenamine per 150 pounds body weight, administered at weekly intervals—will probably give way to smaller doses administered at frequent intervals. The preliminary experiments which my colleague, Dr. Marcus Lyon, and I are carrying out on syphilitic rabbits point in that direction. It is probable that the larger doses may be preferable for the chronic infections where the spirochetes are

(*) Read before the Section on Medicine of the Indiana State Medical Association at the Indianapolis session, September, 1921.

harbored deep in the lymph glands. It is difficult to understand the reasons why mercury is usually administered according to a pre-arranged schedule of dates and doses. Mercury not infrequently damages the kidneys, and if thus given despite the contra-indications it is liable to frustrate the further administration of the arsphenamines. The dosage and time for administration of mercury should be determined from time to time by the results of urinalyses and the condition of the patient. Iodides should be given in larger doses. The doses usually employed are far too small. It is seldom necessary to start on less than 60 to 75 grains daily, rapidly increasing the dose until symptoms of iodism occur. The arsenicals, other than the arsphenamines, have been disappointing.

The majority of syphilitic infections are susceptible to sterilization. The term "sterilization" is employed here in the sense of disappearance of manifest lesions, and the enablement of the "cured" individuals to beget non-syphilitic offspring. No evidence thus far adduced has shown conclusively that the so-called "cured" syphilitic patients still harbor spirochetes and may transmit the disease by sexual contact.

It is appropriate to call to the attention of the Indiana State Medical Association the remarkable work of the U. S. Interdepartmental Social Hygiene Board. That governmental organization has made appropriations to a large number of the country's prominent medical institutions for the purpose of developing better methods for the treatment of syphilis. As a result the following scientists,—Engman, Hirschfelder, Reid, Hunt, Leevenhart, Ordway, Warthin, Winternitz, Hugh Young and many others—are working intently on problems of syphilis. Dr. Reid Hunt of Harvard, who worked with Ehrlich during the latter's search for an effective spirocheticide, has during the past year materially improved the methods for the manufacture of arsphenamine. It can now be manufactured considerably cheaper and purer than has hitherto obtained. Many other advances in the problems of syphilis have been made by these investigators who are cooperating with the Interdepartmental Board. Their results will be published for the benefit of the medical profession as soon as the discoverers have made adequate clinical application of their findings.

There is one problem in syphilis which I approach with extreme hesitancy and indecision. I refer to the wisdom and necessity of attacking syphilis as a public health responsibility. It is apparent that the venereal clinics established jointly by the federal and state health organizations during the war, and since maintained in many communities, have made material inroads against the heavily infected populace. But what should be their future status? Should

they be perpetuated? I know of no justifiable reasons why they should continue to exist as venereal clinics, *per se*. I do believe, however, that venereal clinics should be perpetuated as subdivisions of general hospital dispensaries. If there are no general dispensaries available to the community, then the establishment of a venereal clinic is perhaps justifiable, provided that it takes care only of the infected poor. In other words there are no particular reasons why syphilis should be handled differently from the various other diseases which affect a community.

Public health officials of several states (I have never discussed the subject with the Indiana officials, and do not know their attitude) have told me that federal and state participation is necessary "because the great majority of physicians treat syphilis inadequately, thereby jeopardizing the public health". If that be true, then it would seem befitting that the health officials conduct a campaign for the education of the physicians, directly by informational methods, and indirectly by influencing the necessary regulations in medical licensure. If our public health officials deem it necessary to handle the syphilis problem directly with the people, instead of through the physicians, it is apparent that such action must constitute a step forward in the direction of so-called "state medicine". The solution is up to us as private practitioners of medicine. If we continue in our present rut, state officials will be compelled to handle the menace to its public health directly through the people. If we believe that the responsibility is ours as private physicians, then we must prepare ourselves to treat the disease at least as adequately as it is now being done by the federal and state health officials.

DISCUSSION

DR. WILLIAM S. EHREICH (Evansville): There are a few things in Dr. Hoffman's paper which I would like to bring out a little more strongly, and a few things I wish to disagree with. His percentage of syphilis as applied to the North I think is rather correct, but as applied to the South with its immense negro population it is far too low. I was raised in South Carolina in the rice district where there were many negroes and I think it would be ultra-conservative to say that not less than 30 percent either have acquired or hereditary syphilis.

I think the most important problem in handling this disease is the early diagnosis, and there I can work in a few remarks about the clinic. I think the reason for the existence of these clinics is the very poor treatment that the ordinary physician gives to syphilitics. The important part in the treatment of syphilis, even more than in tuberculosis, is the early diagnosis. We all know that syphilis in the early stages is comparatively simple and is curable, but let it

go on until all the organs of the body become impregnated with the germ and it is a question whether it is ever cured. Now we have a great many physicians in our city, all of whom treat syphilis, but there are only four dark-field illuminators for the detection of early syphilis.

So far as the other laboratory methods go, I am a follower of the Wassermann reaction. I heartily agree with the doctor that the original Wassermann reaction is the most reliable. It is unquestionably an aid to our diagnosis and treatment of syphilis. A one, two or three plus Wassermann reaction means very little to me. A patient either has or has not syphilis. These little variations in reading are a matter of personal equation with the laboratory man, I think. If I am treating a person for syphilis and he is doing very nicely and his Wassermann reaction is negative, I think there is a chance that he has cleared up. If there is an accumulation of negatives over a long time I consider the patient cured. If the Wassermann reaction is positive I think the patient is not cleaned up and my treatment will vary as to whether the test is negative or positive.

So far as the treatment of syphilis goes, there was a time when we thought, and I believe correctly, that mercury cured syphilis. You take any case record today and you find that so many salvarsan injections are given and then so many mercurial injections and then a rest follows. I think that is a mistake. Even taking for granted that mercury will not cure syphilis, I believe that its administration will at least make the body an unfavorable culture medium for the spirocheta pallida; also the mercury will reach the organisms in lymph nourished tissues that the salvarsan will not, since the salvarsan is excreted within a short time of its administration and its effects are only noticed in the blood supplied tissues.

DR. GEORGE W. McCASKEY (Fort Wayne): We are well aware that the Wassermann test is not specific for syphilis, but when patients have not resided in the tropics, it can usually be so regarded with certain slight reservations. I agree with the writer that too much importance cannot be attached to the exact percentage of inhibition, or as it is usually expressed, the one, two, three or four plus. The important fact is that there is something in the blood which, in combination with an antigen, combines with, "binds" the complement, to a greater or less degree, and thus impairs or destroys the hemolytic system. The same patient may show less at one time, and more at another, without any obvious change in his clinical condition. It is notorious that different serologists will get somewhat different results with the same specimen of serum. While a serologist is likely to make a negative report on the basis of a one

plus Wassermann, the fact is that it may mean syphilis, and is a question for the clinician, rather than serologist, to decide. I have been watching these reactions in my own clinical laboratory for years and have many times seen a one plus Wassermann become a three or a four plus. It is well recognized that a syphilitic patient with a three or four plus Wassermann may, or perhaps usually presents a weakening Wassermann, but when it reaches a two or one plus, it should be, and I think generally is, regarded as evidence of a residual syphilitic infection, which indicates that the patient should not be finally dismissed, but should remain under at least intermittent observation over a long period of time, and should possibly have additional treatment. This is, of course, almost equally true when a negative instead of a weakly positive reaction has been achieved.

DR. A. W. BRAYTON (Indianapolis): It is largely dependent upon the impression you can make upon the patient as to the necessity of the persistent use of the old remedies, particularly mercury and potassium iodid where it is indicated. We should not discourage our patients by putting them in a position of believing they are incurable. We should brace them up and tell them the results of continued and perfect treatment. We should always be on the lookout for syphilis. It is deceptive and easily mistaken for other disorders and conditions. The prevention of it for those who are constantly handling it is the use of calomel and grease, one-third calomel and two-thirds grease, before and after, if there has been any opportunity for specific infection, because the spirocheta cannot get by those substances. If they were thoroughly used, according to the instructions given by the United States Army to the soldiers it would be a great benefit to the community at large and to those who are treating syphilis. We should insist upon these patients taking at least four courses of treatment a year. If we keep them encouraged and in good spirits, it will help a good deal, but we should keep after them. If they do not come to the office when they should, send for them, always impressing upon the doctors and the patients themselves the necessity of the long continued and harmless treatment. I think the majority of these patients by taking one-fourth grain of protiodid of mercury four times a day will have no bad effects. They may have a little looseness of the bowels for a few days and so on, but nothing serious. The new remedies have been of great help and assistance and we are persisting in their use, but the old ones are not to be neglected.

DR. W. A. FANKBONER (Marion): I would like to know whether there are ever situations where a repeated plus one Wassermann reaction

can be neglected, the patient showing a clinical cure through a long period of time, perhaps nine months or a year.

DR. ROBERT V. HOFFMAN (South Bend—closing): There are only one or two points about which questions were asked and I will answer those.

Concerning the North and South, I agree that that is the exact situation, but my figures apply to the population of the United States as a whole. It is a problem that the statisticians of the United States Public Health Service at Washington have been studying for a long time. They hesitate to give any figures, their general attitude being that probably 8 or 9 percent are infected. They cannot determine definitely. In the Washington University at St. Louis it runs almost 50 percent for the colored man and in our private practice it may be 3 percent, so they average it up as well as possible. The enlisted soldiers in 1907 ran about 15 percent, in the world war about 9 percent, and the average amount in Officers' Training Camps was about 3 percent, which balances the figures pretty well. [The figures of Love and Davenport (?) after enlistment were not over 3 percent.] The deplorable thing is that when people find some figures are not true, they are pretty apt to ignore all figures.

One negative Wassermann test. Dr. McCaskey, means little or nothing, as we all know. Later on that test may be found positive. The work of Ordway shows that in the work positive complement fixations the cholesterol esters are diminished and that does not necessarily mean syphilis. It means fat, and if the patient drinks lots of alcohol we may get a negative instead of a positive for new chemical substances are produced by the action of the alcohol on the fatty tissues.

I am sorry the question of the arsenicals was not taken up more thoroughly. I expected that to be discussed by the people who have used silver salvarsan and various other preparations. I recall that among the first articles published were those obtained from certain New York laboratories, containing a very glowing report on silver salvarsan. I had an opportunity of looking into the records to determine the basis from which he obtained his figures but they were not available—the conclusions were more or less of a "general impression". When such a good observer as Hazen reports that, while using silver salvarsan, mucous patches have appeared in the mouth, it makes one a bit skeptical. Experiments have shown that none of the substances so far produced have had quite the value of arsphenamin and neoarsphenamin. There is a general impression that arsphenamin is a little better than neoarsphenamin, but this has never been quite proved by anyone, despite

the very intensive work of Kolmer. The fact is that anyone can use neoarsphenamin. If you get the arsphenamin solution into the tissues instead of into the vein, the patient will probably never return for further treatment, but if you get the neoarsphenamin into the arm by mistake the patient will not have such a serious lesion.

As to the question of rendering negative a persistent series of positive reactions, that is a problem. If you wish to give fifty or sixty injections of arsphenamin it may be reversed. Many of these are cases wherein the infection has not been wiped out, and the spirochetes still remain in the lymph glands.

It seems best to use the ice box method where the reaction will prevail much longer. It is hard to render certain cases negative. The important thing is that experience has shown that thousands and thousands of these patients after having been treated are married and have Wassermann negative children. These people live for a long time, feel well and have healthy children, and it seems to be the practical view to take, rather than be concerned with the few spirochetes lying dormant in the lymph glands.

WHAT THE GENERAL PRACTITIONER CAN DO IN OTOTOLOGY*

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This paper is not written as a reprimand, but with a central idea, sincere hope and desire that an intense interest may be stimulated in otology, rhinology and laryngology by the profession at large. Not that every practitioner will, of necessity, need to become a specialist, learn a slip-shod technique of operation, and thereby attempt some difficult procedure which will obviously fail of its purpose, but that every man practicing medicine will become acquainted with the simple instruments and normal anatomy of the ear, nose and throat, so that he will be able to recognize pathology early, at which time it is always simple.

To demonstrate our purpose, we will consider acute otitis media. It is an acute inflammation of the middle ear, a study of which must be made from its anatomical pathology and the allied structures, nose and throat, in order that subsequent complications may be expected and appreciated.

The complications are (1) acute suppurative and non-suppurative osteitis of the mastoid, (2) infective sinus thrombosis, (3) epidural abscess, (4) cerebral abscess, (5) cerebellar abscess, (6) diffuse suppurative labyrinthitis, (7) circumscribed suppurative labyrinthitis, (8) purulent

*Presented before the Eye, Ear, Nose and Throat Section of the Indiana State Medical Association, Indianapolis Session, September, 1921.

leptomeningitis, (9) meningitis, (10) chronic suppurative otitis media, (11) loss of hearing, (12) otosclerosis and tinnitus. The least of the twelve is a grave complication, and nine of them, when they are not recognized early and properly cared for, are in a vast majority of cases fatal. This battle line of the enemy should stand out, clear as a cameo, in the mind of any doctor when he stands on the other side of an acutely inflamed middle ear.

It has been well put by Newhart, when he says, "No branch of medical science is more neglected or none offers more promising results than study of ear diseases. Too long has the attitude of the average practitioner toward disease of the ear been one of passive indifference, confessed helplessness, or boasted ignorance." The charge for this blame should properly be laid to schools that made the doctor. Many of the schools, despite high classification, continue mediocre service to their students. The general practitioner's lack of enthusiasm in otology is due to this failure of the schools to provide sufficient and proper instructions in diseases of the ear, nose, throat and mouth. The head mirror and otoscope, and how to use them, are as essential as the stethoscope, and should be a part of every practitioner's armamentarium. Especially is this true in our particular climate.

Babies are absolutely unable to localize pain, and children up to ten years of age, unreliable. If it were possible that children could be relied upon to express themselves accurately as to pain, the affection of the ear should be discovered before pain has made its appearance. It requires but a limited amount of practice to be able to see and acquaint one's self with an ear drum and its half dozen landmarks. Any doctor could well afford, and he would derive satisfaction and pleasure to himself, besides being of inestimable value to his patients, if he would take three or four weeks' training in diagnosis in one of our numerous clinics. The tendency has been universal, among laity and profession, to neglect everything but the most obvious and painful ear affections.

Writing of this manuscript was disturbed just at this point by a man bringing his boy into the office suffering an intense earache, the result of snuffing water into the nose while swimming. The pain had been endured for ten days. The ear drum was bulging and red. Patient had increased temperature and a marked tenderness over the mastoid. Patient had been seen by a physician from the onset of the cold in the head. No ear examination had been made with light and specula. Patient was advised to syringe ear with hot water and instill some drops frequently. Patient left his physician and came into our office at the request of his dentist. Naturally the father was disposed to criticize the physician severely. This boy's ear drum

should have been incised and the patient put to bed not later than when the pain began.

One especially trained in the diseases of the ear generally sees these cases too late to secure perfect results. To those of us who limit our practice to the special subjects, it is remarkable that neglect is as common in the intelligent and well-to-do as among the clinic patients. We emphasize that the laity are not to blame. If we hope to fulfill the great responsibility entrusted to us by the people of our communities, we must become teachers of health preservation, by laying aside a grave expression and dignified silence, which formerly cloaked a mass of ignorance, and teach in simple language to the laymen the structure, function and dangers common to the ear, nose, throat and mouth, in order that he can keep himself and family well. It is advisable that a small text book on the diseases, and how to prevent them, of the ear, nose, throat and mouth be placed in the curriculum of our common schools, and made a part of the prescribed course. In twenty years our communities would be intelligent, the family physician filling his needful and rightful place, with fewer specialists, more teeth and tonsils preserved, less suffering and greater happiness. However, under our present mismanaged system of impartation of knowledge we as doctors are pledged by the implicit faith placed in us by those who come for our service, to make an accurate and early diagnosis, anticipate and prevent complications, rather than offer a cure.

Before the Muncie Academy of Medicine recently, Dr. Joseph Beck read a paper emphasizing the need of recognizing the space of time that exists between an infection of the ear, nose, throat and sinuses, and the complicated end result. If the patient is seen early, which he would if he had been taught as referred to above, the disease would be recognized, complications anticipated, proper advice and treatment given, and we would have fulfilled our obligation and had an appreciative and well patient. Quoting Newhart again he says, "About 75 percent to 85 percent of all of our ear diseases are preventable, and at least three-fourths of them can be eliminated in a single generation. It is evident that the weight of responsibility lies on the general practitioner rather than the otologist, for it is the former who by his intimate contact with the family is able to give advice when it will be most productive of results. Especially in the community where there is no ear specialist, the physician must fulfill his public obligation by making himself familiar with the principles of otology and the necessary tests. He must detect even slight departures from the normal, and differentiate between lesions of the sound conducting and one of sound receiving apparatus. It is only by the very early recognition of abnormality and the immediate removal of all

active factors that any material advance can be made in combating the insidious affections which cause so large a percentage of deafness, often first noticed by the patient only after he has reached adult age. This point cannot be emphasized too strongly, for the average individual is, as a rule, quite unaware of any gradual oncoming impairment of his acuity of hearing until it is reduced to less than 20 percent of the normal.

VonTrolltsch has gone so far as to say that among persons over twenty years of age, when tested with great accuracy, one out of every three shows some impairment of hearing. Professor Koerner of Rostock made the surprising, but as yet unrefuted, statement that 4 percent of all deaths occurring in Prussia under the thirtieth year of life were due to ear diseases. On the basis of available statistics it has been conservatively estimated that there are in the United States today not less than 3,000,000 persons whose hearing is so impaired as to exclude them from many occupations, and to interfere, more or less, with their educational progress and social contact with their fellows. A single manufacturer of an electrical apparatus to aid the hard of hearing publicly advertises that there are in use 400,000 of his appliances. Within the past twelve months, in our own office, we did a functional test on both ears of 412 patients. One hundred and seventy-four gave as their chief complaint some disturbance of their hearing; 238 gave no complaint of impairment of hearing, nor were conscious of any pathology about their ears. Of these 238 patients who had no ear complaint, 40, or 16.4 percent, showed impairment of hearing. E. W. Kobler, in a paper entitled "A Survey of Ear Conditions in School Children," says, "The ears of 500 New York public school children were examined and it was found that 152 showed relative degrees of deafness."

The American Association for Hard of Hearing in tabulating 174 cases report the causes of deafness as follows: Measles, 6; scarlet fever, 13; meningitis, 13; diphtheria, 6; syphilis, 8; catarrh, 70; nerve deafness, 16; hereditary, 8; oto-sclerosis, 2; child birth, 1; occupational disease, 2; unknown, 29. The medical profession cannot escape the accusation that it has failed of its purpose when it is shown that 70 out of a total of 174 deaf people, practically 50 percent, is due to catarrh. What is catarrh? In the simplest terms the word spells contact of mucous surfaces somewhere in the upper respiratory tract and is preventable. To whom shall the layman appeal for information to prevent this awful waste other than the medical profession? The remedy is simple enough when thought of in a systematic way. First, a knowledge of the anatomy and physiology of the ear, nose, throat and mouth. The nose commands

more attention as it is the outer guard or sentinel of safety. Given an infant with a normal respiratory tract, keep its nose open so that the air breathed passes freely, is warmed, filtered and moistened, the normal mucous secreted is evaporated by the air passing through, and this child should grow into healthy manhood without ear trouble or diseased pharynx or larynx. If hypertrophy of the adenoid occurs, it will have to be removed. The child's face will need to be protected from falls from beds and high chairs, the latter an evil which should never have been invented. In its young manhood and womanhood the modern athletics of basketball, football, and boxing should not be indulged. A paper could be devoted to the evils of these modern athletics. Heart, kidneys and central nervous system are impaired during training season and college contests. Just about the time the individual assumes responsibility in the business world he finds that he has catarrh, impaired hearing, frequent attacks of tonsilitis, rheumatism, and all the sequels of focal infection.

The duty of the doctor is primarily that of a teacher to his clientele and for examination of his patients he should possess a light, head mirror, tongue depressor, rhinoscopic and laryngoscopic mirrors, pillar retractors, and know the proper position to place his patient for examination. These can be easily mastered and obtained from any of the text books on ear, nose and throat. Keep the nose open and free to function, acute otitis media and mastoiditis will be reduced to a minimum, chronic catarrh of the middle ear and induced deafness will disappear. Hypertrophied and infected tonsils will not be met with.

No field of medical endeavor is receiving the attention that the upper respiratory tract is. The goitre specialist, heart specialist, genito-urinary specialist, internist, in fact the majority of patients are subjected to a scrutinizing examination by these men for focal infections about the nose, throat and mouth before forming a judgment or outlining a plan of procedure of advice and treatment.

A study of the nose internally includes septum, turbinates and sinuses. Both chambers should be equal. Septum should be straight and free of spurs, ridges or other deformities. Turbinates should hang free in their respective chambers. Especial attention should be paid to hypertrophy of posterior tips of inferior turbinates. If any of these are in contact by reason of hypertrophy, deviations, spurs or ridges, the condition is pathological and chronic rhinitis results. Tubal catarrh will follow with an end result of impairment of hearing. These abnormalities favor sinusitis by reason of obstructing outlets for drainage and aeration. We estimate that fifty percent of the hay fever and asthmatics

are due to mechanical defects in the nose. Our results show marked improvement and cures in about that percentage of cases.

One must know that the sphenoid and posterior ethmoid sinuses empty into the superior meatus and drain posteriorly into the naso-pharynx. The symptoms are stuffy nose, discharge into the throat, headache, and discomfort over the bridge of the nose. The frontal, maxillary and anterior ethmoids empty into the middle meatus and discharge found here indicates infection in one of these. The discomfort and pain usually point to which affected. Obstruction for air into any of these sinuses will cause a sensitization of the walls and produce pain. Ulcers and localized indurated spots in the nose suggest syphilis, tuberculosis or malignancy.

A study of the pharynx includes the naso-pharynx, oro-pharynx and laryngo-pharynx. In the naso-pharynx one will see the posterior tips of the turbinates, the posterior end of the septum, mouth of the eustachian tubes and the adenoid. The common pathological conditions found are hypertrophy and inflammatory.

In the oro-pharynx are the faucial tonsils lying between the anterior and posterior pillars, posterior pharyngeal wall, lateral pharyngeal wall, lingual tonsil at the base of the tongue, epiglottis and uvula. Inspection of the oro-pharynx always includes the mouth, tongue, cheeks, palate and teeth. The size of the tonsil is no criterion as to the pathology present. A large hypertrophied tonsil will be obstructive, but owing to its constant washing by saliva it will of necessity carry less infection than a small embedded tonsil. Attention must be called to adhesions of the pillars to the tonsils. Foci of infection are frequently hidden beneath a small adherent pillar. With a pillar retractor tonsils can be easily expressed and direct inspection made of the contents. If the pillars are red, infection is present.

Lingual tonsil is a frequent cause of a tickling cough, due to hypertrophy and coming in contact with the epiglottis. This is more often a cause than enlarged uvula.

All these parts are subjected to acute inflammations. Any ulcers always suggest syphilis, tuberculosis or malignancy and should be watched carefully. Avoid caustics, simple ulcers heal of themselves in a few days.

The laryngo-pharynx is a continuation of the above down to the esophagus. It is subjected to the same inflammatory conditions.

The relation of the ear to all of these nose and throat conditions must never be lost sight of. Most of the ear conditions are direct continuations of inflammations elsewhere and should be examined frequently and carefully during any nose and throat affection, especially during exanthematous attacks.

A study of the ear includes an inspection of

the auricle and external auditory canal. It should be remembered that the latter is one and one-quarter inches in length, narrowest at the middle. The highest point of the floor is at the middle. Its direction is first upward and backward and downward and forward beyond the narrowing. To straighten, the ear must be lifted up. In infants, the upper and lower walls are in contact, due to lack of bony development. The drum closes the canal at an oblique angle. The knowledge of the obliquity is essential in determining abnormality of the drum and in incising. The outer half of the canal has hair. Furunculosis exists in this part only.

It should be remembered that the middle ear cavity is approximately the size of a grain of Indian corn, and the distance from the drum to the internal tympanic wall is but two to three millimeters. Hence bulging of the drum is produced by very little serum or pus. Any inflammation of the middle ear is secondary to tubal inflammation, which closes internal drainage, and the only means of escape of inflammatory products is by free drum incision.

Incision of the drum should be made unhesitatingly as the incisions heal promptly. The chorda-tympani nerve crosses the drum and may be severed in incision. Loss of taste on the same side of the tongue will be experienced, but is regained when the incision is healed.

Simple tests for locating impairment of hearing should be learned, so that the pathology may be located, whether in the conducting or receiving apparatus.

During the past twelve months we were consulted by 352 patients with various ear complaints. Our records of diagnosis show the following:

Auricle. Impetigo 3, sarcoma 1.

External Auditory Canal. Furunculosis 20, eczema 12, myringitis 2, foreign bodies 4, impacted cerumen 32, ruptured drum—traumatic 1, occlusion by an hyperplasia of connective tissue 1.

Eustachian Tube. Acute inflammation 26, chronic inflammation with hyperplasia 38.

Middle Ear. Acute catarrh 6, acute purulent middle ear 76, chronic catarrh middle ear 58, chronic purulent middle ear 30.

Mastoid. Acute mastoiditis with operation 46, chronic mastoiditis with operation 10.

In this series of 342 ear cases, 258 were complications that should have been prevented. The intelligence of the patients should have been sufficient to have induced them to have sought relief early, and of those who did consult a physician early the advice and treatment administered should have arrested the advance of the disease.

In the series of 56 operated mastoid cases,

five were bilateral; ten were advanced sub-periostal abscesses. There were five cases of lateral sinus thrombosis, three of which were of long standing when seen. The three promptly died of general septicemia. Two were in the hospital under close observation when the pathology manifested itself. Both made uneventful recoveries due, we think, upon recognizing sinus thrombosis, and operating immediately after the first chill and sudden rise of high temperature. Three cases developed temporo-sphenoidal brain abscesses, two of which were in the lateral sinus group. The two that were moribund when admitted to the hospital died, one due to a rupture of the abscess and pouring of pus into the ventricle of the brain. This case did not have a thrombosed sinus. The second died from general septicemia, the abscess was evacuated. In the case which was in the hospital and carefully cared for, the abscess was evacuated, and the patient made a good recovery. One case died post-operative from meningitis. She came to operation six weeks after being advised that a mastoidectomy was necessary. Meningeal irritation was present at time of operation. Any one of these seriously complicated cases could be recited in detail, with much interest to this section, and stimulate discussion of great importance to us as a body of specialists. However, that is beyond the intent of the purpose of the paper, and I have incorporated a perusal of them only to emphasize that they really exist and are frequent in occurrence. The results obtained in the two successfully conducted sinus thrombosis cases demonstrate that one should not delay in suspected sinus thrombosis to operate the sinus upon the advent of chill and high temperature. To wait three or four days to make sure is depriving the patient of an almost surety to live and reducing him to a doubtful chance. Of course you will understand that in the cases we are under most grateful obligation to the internist, neurologist and ophthalmologist. Without their co-ordinated skill and knowledge we should have been tremendously handicapped.

In our office we have practically come to the conclusion that mastoiditis, like appendicitis, should be operated upon diagnosis. In my student days I was taught watchful waiting in appendicitis. The laymen know better now. The complications in mastoiditis are equally grave, unoperated the fatalities as great. Shall we be laggards in our specialty? The general surgeon cannot announce edicts for us. Years of improper teaching has led the general practitioner and layman to look upon mastoidectomy as an operation of such serious import that it is done only when imperative. This idea is wrong. The operation is relatively simple, and safe in skilled hands. Once that a patient has mastoiditis he is as sure of a recurrence as the

patient in the appendix case. The operation is of no greater risk.

DISCUSSION

DR. GEORGE W. SPOHN (Elkhart): After thirty-five years' experience I naturally have different views than I had when I was the age of the essayist. I agree with Dr. Kearby that the general physician should be better prepared for ear work. As it is he does all kinds of work, even operating upon anything that presents itself. Most specialists practice the art because it offers better opportunities for *good work*. It would seem that their field would be small, and yet they realize that one cannot cover the whole subject of medicine and do justice to the patient.

I hope that no general man will treat an ear case but will refer all such to the specialist, not expecting any compensation from the specialist for so doing. There are some physicians who will attempt to treat eye and ear cases, not knowing how many eye cases become blind and how many ear cases become wholly or partially deaf because of wrong first treatment.

I agree with the essayist that many cases of otorrhea might be avoided if handled rightly, but is the general practitioner to blame for an infection that has passed up the eustachian tubes? Politzer tells us that all cases of acute ear infections carry with them an involvement of the mastoid. From what I have seen in my work the trouble lies not so much with the general physician as with the parents. Though it may be an offensive subject, yet it is a fact that very few infections ever pass up the tubes if the nose is rightly blown. If our welfare stations and teachers would teach children how to blow the nose, there would be very few cases of otorrhea. You will not agree with me upon this question, but it is a question of physics, pure and simple. If one studies the mechanism of the ears and teaches the physiology of the ears to the children, there will be fewer cases of colds, nasal discharges and otorrhées.

DR. ALBERT E. BULSON, JR. (Fort Wayne): In the main I agree with the essayist that a general knowledge of ear affections is desirable, and yet I am satisfied that the old saying, "a little knowledge is a dangerous thing," is very true when it comes to the recognition and treatment of ear diseases and especially those that lead to serious consequences. The trouble of it is, the man who has had only superficial training and a limited experience is not very qualified to decide when a condition is serious or not. A condition that is very serious or may lead to serious consequences may appear to be very simple to the average practitioner and vice versa. However, I do believe that every physician should be able to differentiate between a normal ear drum and one that is congested, though even

in attempting that I have seen some serious blunders made by well trained general practitioners who really have had considerable instruction in the use of the head mirror and speculum and the recognition of acute inflammatory conditions of the middle ear. It has been my observation that the very best general practitioners do not rely upon their judgment at all, though they have sufficient training to recognize the possibility of ear complications as being a factor in producing certain symptoms, and in justice to the patients as well as themselves they call a specialist to their aid. To me the most important thing is that the physician should recognize the possibilities of the ear trouble rather than be able to recognize the ear trouble itself. Already we are burdened with too many pseudo specialists, and when these pseudo specialists make almost criminal blunders, how are we to expect the general practitioner to do any differently when he has even less training? I do not agree with the essayist in the assertion that the general physician should be able to make functional tests of the hearing and differentiate between diseases of the sound conducting and sound perceiving apparatus. He will serve his patients best if he recognizes his limitations, and while I am heartily in favor of educating the general physician up to the point where he can distinguish abnormal ear conditions and their possibility for harm, yet I think that is as far as his attention to the patient should go if the patient's best interests are to be served.

DR. GEORGE F. KEIPER (Lafayette): As Dr. Bulson has just stated, the best equipped men in general practice will not treat the cases cited in the paper. Permit me to give a leaf out of the experiences encountered by myself. We have some practitioners in our city who do a great deal of practice among children. They know what many another does not seem to know, that a fever in a child may be due to an incipient otitis media purulenta. In such an emergency they shift these patients to the otologist, who finds the diagnosis correct as a rule. The ear drums are opened, as ear drums should be opened, and the fever promptly subsides. The child promptly recovers with no ear complications. How often do we see the other condition of affairs where the little one is allowed to suffer until the ear drum ruptures itself, and in the meantime an acute mastoiditis is the complication.

But we are in a poor way to advise our brother practitioner what to do until we clean house among ourselves. It is a notorious fact that of all the men and women practicing in these specialties, three out of every four are not competent to practice ophthalmology and otolaryngology, and until we clean house among ourselves the general practitioner will not take

very much notice of what we may say or write for his or her edification. But if we approach this subject in a becoming manner, humbly, willing to show the profession how to treat these patients and what it means to neglect the means at hand, I am sure that they will then be ready to give the attentive ear, and their patients will profit thereby.

There is coming—and it must come—a standardization of these specialties. It has already been instituted in ophthalmology. We now have the National Board of Ophthalmic Examiners. We are hoping that this day is dawning in otolaryngology, and, in fact, efforts are now being made to that end. With these boards in existence it will be but a matter of time until every one essaying to practice in these specialties must appear before these boards to establish competency. At the present time it is voluntary, so far as the Ophthalmic Board is concerned, but to date many have been willing to submit to the examinations of the Board to determine their fitness. When all this is accomplished the general practitioner will regard these specialties with more favor. The postgraduate course of six weeks to three months must disappear before the seminar of a year at least for preparation leading to the practice of ophthalmology or otolaryngology.

DR. C. H. McCASKEY (Indianapolis): I think it is generally true that the average medical school is now trying to teach its students the fundamentals of otolaryngology—not to make them practitioners of this particular specialty, but they are trying to make them understand the normal, as nearly as possible, and in doing that they are usually taught to find the pathological. Students are taught something about the inspection of the normal ear. These men, when they go out from school, do not wait until a child has a bulging ear drum. They find it before it begins to bulge, when it begins to redden—for instance, in scarlet fever, or measles, or any other acute, infectious disease of childhood.

I am perfectly willing to admit that we need some housecleaning among ourselves. There is certainly a tremendous feeling on this. My personal opinion is that any practitioner of medicine should be quite as well acquainted with his head mirror, and his instruments for examining the ear, nose and throat, as with his stethoscope. The man who is doing the whole field of medicine is not as keen with his stethoscope, perhaps, as is the man who is listening to the heart day in and day out.

My plea is not that every practitioner should be an otologist, but he should know enough about it to recognize the pathology early, and he is the fellow who will recognize the normal condition and the pathology that follows—infection or what not. The man who cannot do

this is dangerous. I think we can prove that in our own clinics and hospitals.

Somebody said at Kansas City a year ago that the young undergraduate should know enough about otolaryngology to make him a good interne. Practically all of our boys go through hospital training and if they have had enough teaching of otology to make them good internes they will know a little something about early diagnosis of these ear troubles, and if they are fairly conscientious they will not do the wrong thing.

DR. M. H. KREBS (Huntington): I desire to second Dr. Bulson's statement in regard to those men who don't know very much. At the same time I want to say that I do not think that we should condemn some of the general practitioners who are doing ear work. Since the war a number of the men who were in general practice have found that they were unable to continue their general practice. They saw the men who were doing specialty work, and they immediately went to schools which claim to train men in specialties in two to four weeks. I really think that the necessity for doing house-cleaning among ourselves is owing to the fact that so many of our men who were in the general practice have gone into this special field of medicine, and not being properly trained they give us as much or more trouble than the general practitioner. I have great respect for the general practitioner.

I can cite one case where a general practitioner had as a patient a little boy with an intermittent fever. He called me into the case. I examined the boy very carefully, but could not establish any diagnosis of mastoiditis, and the x-ray pictures didn't show any mastoiditis. Yet the child went right along with fever, and the doctor kept insisting that there was trouble somewhere, and he believed it was in the mastoid. Finally we went in there, and both mastoids were involved. There was a purulent infection of both mastoids. So I have great respect for the general practitioner, and I want to take issue with Dr. Spohn in his assertions.

DR. D. O. KEARBY (closing): I qualified the paper early by saying that while all men may not learn the technique of operation or treatment, every man should know enough so that he will be able to recognize a condition, and then select somebody that is capable of taking care of it.

My experience in Indianapolis with our pediatricians is that they are good diagnosticians, and I have not had the sad experience of having to follow where they have attempted to open an ear drum. If they do that kind of work, I don't know it. My friends who are taking care of children, when they find otitis media, recognize it, and call upon some of us to help them out in the treatment.

When I was a medical student twenty years ago, I was taught scarcely anything about the ear, nose or throat. As I practiced medicine, my patients became my friends, and I soon realized that I should be able to recognize diseases common to the nose, throat and ear, not to be able to do a mastoid in order to make a few dollars, but to be able to recognize the condition of the ear drum before a mastoid complicated it; that I should know sufficient about the nose to recognize that chronic rhinitis is due to malformation of some sort, and refer the patient to somebody who could take care of him properly.

In this paper no blame has been attached to the family physician anywhere. It was written in hopes that it would stimulate him to carry in his grip that sort of equipment, so that in the treatment of ugly, infectious diseases, of which we have so many, instead of depending entirely upon the stethoscope to listen to the lungs, and the thermometer to get the temperature, he will study the ear drum, not with the idea that he is going to open it, but to know whether it is, or is not, infected, and thus save the patient from a complication.

My plea in the paper, gentlemen, has been that every practitioner should have sufficient knowledge of, and be sufficiently acquainted with, the simple instruments that we use, to use them properly, make a diagnosis early, and then correct the condition before a complication arises.

SAND BUR IN THE LARYNX
REPORT OF A CASE—ENDOSCOPIC REMOVAL
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LAFAYETTE, INDIANA

Apparently the presence of sand burs in the larynx or trachea is of infrequent occurrence. Reports of such cases in medical literature are very rare. At the last meeting of the Section on Laryngology and Otology of the American Medical Association, Dr. H. Marshall Taylor of Jacksonville, Florida, read a paper on this subject. He reported a series of nineteen cases, in sixteen of which the burs were removed from the larynx, and in two from the right bronchus. But very few were able to participate in the discussion which followed, owing to lack of similar experience. Even the high priest of endoscopy in this country, Dr. Chevalier Jackson of Philadelphia, had never extracted such a foreign body from the tracheal tree, and he has removed about everything else along this line.

From private conversation subsequently with a large number of the men present at that meeting, I learned that none of them had ever encountered such experience. Yet sand burs are found all over the country wherever sandy

places abound. After thirty years of laryngological experiences I never had such an experience either. However, since that meeting it has been my good fortune to encounter such a patient and to remove the sand bur endoscopically.

On August 8th this year I was asked by Dr. George R. Clayton of this city to remove, at St. Elizabeth's Hospital, by the direct method, a sand bur from the larynx of Miss Mabel L., age 16, of Medaryville, Indiana. Her general condition was otherwise normal save for a temperature of 100 degrees F.

Two days before, while playing with the sand bur, in an unguarded moment she placed it in her mouth, and a sudden inspiration caused it to be carried into the larynx. It lodged on the right vocal chord.

Her family physician attempted its extraction unsuccessfully by the indirect method. Dr. Clayton likewise failed. When I looked down the throat with the mirror it looked so easy that I attempted it thus and failed. I have vowed several times that I would never even attempt the indirect method again.

After the failure to extract it indirectly, we laid the patient on the table with the head extended over the end of the table, and supported by Dr. Clayton. I then inserted the Jackson speculum, caught up the epiglottis and gently entered the larynx. The sand bur presented beautifully and with the tubular forceps I grasped and removed it, a maneuver taking only a couple of moments of time. I exhibit the specimen to you to show you what a dangerous thing it is to have in one's breathway.

Medaryville is situated in the northwestern part of Indiana, in a sandy region which becomes much more so as the cities of Gary and Michigan City are approached. Sand dunes abound and these grow sand burs in great abundance, the ground being matted with them.

Taylor in his article referred to reviewed this subject of sand burs in the air passages quite thoroughly and finds eighty-five cases in the literature and otherwise. Seven of these had "successfully run that gauntlet consisting of the epiglottis, upper laryngeal orifice, ventricular bands, vocal cords and trachea to become a foreign body in the lungs". In other words these organs are the watchdogs of the tracheal tree. Of the eighty-five cases, six resulted fatally. One of these was a patient of Taylor's.

In the series reported by Taylor, the oldest was 22, a woman. The others were less than twelve years of age, seven being between the ages of 8 and 12. The youngest was 3 years of age. My case was 16 years of age.

My case also confirms Taylor's observation that an exudate is thrown out over the bur

which may be so excessive as to simulate diphtheria in the larynx.

DISCUSSION

DR. D. W. LAYMAN (Indianapolis): There is one point in this foreign body work that I wish to bring out, because I feel that a great many physicians who are not acquainted with bronchoscopy and esophagoscopy look upon the general conditions, physical conditions, anatomical conditions, the manual dexterity necessary to remove foreign bodies, etc., just about the same whether the foreign body be in the upper respiratory tract or in the esophagus. This is a common error, and the physicians should be taught that these conditions are entirely different. In the first place, in the esophagus you are dealing with a collapsed tube. In the upper respiratory tract you are dealing with the upper part of the esophagus, which is supplied with muscles, and the musculature there produces spasms more marked in some cases than in others. In dealing with the esophagus you have a tube that is more apt to rupture in manipulation. You have not that sense of sight and touch that you have in the more open tubes. The upper part of the esophagus being open and having larger spaces, the foreign body is more apt to be hidden in the folds.

On the other hand, in the lower part of the esophagus, you might say from the thoracic aperture, you have a negative pressure. If the body has passed the thoracic aperture, it is apt to be turned downward.

In giving a general anesthetic for foreign body work in the esophagus, the foreign body is more apt to pass and be forced downward than is a foreign body in the upper respiratory tract, because of this relaxation and this muscular spasm in the upper part.

DR. ALBERT E. BULSON, JR. (Fort Wayne): I congratulate Dr. Keiper upon using the direct rather than the indirect method in removing the sand bur from the larynx. The time has come when we ought to get away from the idea of removing foreign bodies from the larynx by the indirect method. Direct laryngoscopy and bronchoscopy is now so well established and is such an excellent procedure that it ought to be adopted by every operator.

Inspiration of sand burs evidently is rare. I have seen one or two cases of sand bur in the throat but not in the larynx. In one case there was great suffering from spasms of the glottis. The interesting feature of these cases is that for the most part the foreign body can be removed without giving a general anesthetic, and that is a matter of great importance.

DR. ADAM B. KNAPP (Vincennes): Twenty years ago I had the fortune, or misfortune, to see a case of sand bur in the larynx. The mirror showed the sand bur lying against the lower

surface of the vocal cords. It could be seen just as plainly as if I had had it in my hand. I did not make any effort to remove it, as all surgical procedure was refused. The young girl carried the sand bur for about twelve months, and was able to speak in a whisper, but not above a whisper. At the end of that time she had a spell of severe coughing, coughed the sand bur out of the larynx, and brought it to me, to show me that she had delivered it. The spines of that thing were just as long and just as hard and firm as the day she inspired it. What happened to bring it out I don't know.

DR. GEO. F. KEIPER (closing): I used a local anesthetic, a four percent solution of cocaine swabbed on the pharyngeal membrane only, none in the trachea. It is advisable to work under a local anesthetic. General anesthetic is very dangerous, and should be avoided.

I have searched the literature for similar cases, using Dr. M. A. Goldstein's Review published in the *Laryngoscope* every April. I ran that way back and could find no record like Dr. Taylor's, and mine. Sand burs are very prevalent and surely many other physicians have encountered similar experiences which they should record for the benefit of the profession in general, and their patients in particular.

As to endoscopy in general: The indirect method is out of date. The direct method is so much better if you know how to use it. But be sure that you learn it first under careful tutelage and by the dint of much practice, one way or another thereafter.

A MEDICAL SERMON*
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The time limit cut out most of my sermon, but I shall state my text from the 30th verse of the 15th chapter of the Gospel according to St. Matthew, who said: "He that is not with me is against me, and he that gathereth not with me scattereth abroad." For ten years I have preached this sermon, and tonight I preach it again. The subject is more vital tonight than it was ten years ago and unless the medical profession as a unit meeteth in my name it scattereth abroad.

I hope I am not hyperesthetic! I hope I am not an alarmist! I hope my vision is clear when I say I see in the distance the dark cloud of socialized medicine still coming our direction, gathering as it comes many blind and selfish groups and individuals.

Let us first consider what changes have taken place, what changes are taking place, or are about to take place, which changes make it necessary, desirable or unavoidable to socialize

medicine. Up to the last generation, or about, the pauper was perhaps the most important practical question with which the medical profession had to deal. The old English idea that charity was more or less a disgrace prevented to some extent the growth of socialistic ideas. Now days when charity working has become as distinct a profession as law, is it any wonder our ideas are gradually being moulded in favor of the state's supervision of poverty and charity? The growth of industrialism with its increasing competition has made it necessary to have someone look after the sick and maimed so that the grist from the mill will not stop. The harangue for efficiency has attracted the attention of the employer, the economist and the sociologist, and has helped to give birth to the social worker. The social worker by clever propaganda has not only evolved and refined her position into a profession of extreme honor and necessity but has been seized upon by medical socialists and made into willing tools for the sowing of seeds of socialism in medicine. Modern medical education, vague ideas in regard to the relationship between the medical school and people, rapid strides of medical science, especially in regard to the causes and prevention of disease, have added impetus to the campaign for centralized, nationalized and bureaucratic control of medicine and of the medical profession.

Medical education is now such that the graduate refuses to go back to the country town where he has few luxuries in life and small opportunity of practicing experimental medicine according to the latest theory from the laboratory.

Thus, paradoxically, modern medical education has given the honest and dishonest propagandist the erroneous idea of a scarcity of physicians. These reasons, together with economic factors, gave Julia Lathrop the chance to say to the congressional committee in charge of the Shephard-Towner bill, "Why put this work in the hands of an already overworked class when there is now a scarcity of physicians in the country, and when women social workers can do this work as well? This is a social problem." We know she was uninformed or purposely misrepresenting; and as for a social problem, I have never seen any sickness or injury which was not a social problem, and will be, so long as there are any relations between members of society.

The world war with its rapid destruction of man power and material wealth has promoted the desire for a flawless machine to replace those losses, to prevent future losses, and to be prepared if such future losses become necessary. With such mixed altruistic and selfish purposes existing, much confusion of action and thought

(*) Read before the Indianapolis Medical Society—The Medical Society of Marion County, March 21, 1922.

exists. Such mixed purposes and confusion has led to the jumbled up ideas of socialism, bolshevism, communism and other isms of which socialized medicine is one of the wobbly wheels. This reminds me of the old champion mower. This machine in place of the straight pitman rod had a complex universal wobble gear to give cutting power at any angle. It was a wonderful selling point, but it wouldn't work. The end nearest the power cut high, and the one farther away cut low, and there was no chance to exchange ends. In like manner socialized medicine, with a high and low cutting end, is only a selling point. The agents are many, various interested individuals and groups who fail to say when selling that when a man is underpaid, under compulsion, or his initiative taken away from him and vested in a high cutting end close to the power he refuses to do good work.

Faculties of medical colleges are apparently not satisfied with their positions as salaried men with the privilege of private practice brought to them by the advertisement of their position, but in many instances covertly or openly attempt the building of state machines with themselves as the respective heads, relegating to private practitioners the honorable position of reference physician to the people. You are doubtless aware of what was attempted in Michigan by the state medical school. You have seen with what poor grace those men backed out of their position. Dr. Hugh Cabot is reported to me as having said one of his reasons for coming to Michigan was because that state would be next to take up state medicine. You have heard what Cornell and Harvard have done, what Buffalo is doing and you can surmise what may be done in other states when the time seems opportune. What these schools have done can easily be done by any organization financed by state taxes or by a philanthropic endowment. It is needless to discuss the effect upon the economic stability and development of competing industries if some were able to endow themselves through charity or the state. At Cornell we have a charity endowed clinic in competition with private practice. In Michigan we had the attempt of a state endowed institution in competition with private practice. I ask you what is the difference between state endowed industry in competition with private industry and between a charity endowed clinic, or a state endowed institution or a charity or state subsidized doctor in competition with private practice?

The recent enfranchisement of women has given to that sex an enlarged idea of importance in government. This idea, born of the maternal instinct, seeks its outlet naturally through state medicine and other socialistic schemes. Mothers are making their appeal through pictured

useless and avoidable suffering of maternity and of their babies. Those who are not mothers, and those hopeful women who cannot be mothers, make a dangerous appeal to sentiment, and you have a hard time beating sentiment. These women are dangerous because you never know what they will do. Their rhetorical figures of speech are treacherous. They say all people are learning how much misery sickness causes and are demanding the decrease of misery. They say the state cannot afford sickness, must have health, no matter how it comes. They tell how advanced medical men preach it, that business and insurance men say it will pay, that social workers ask why we go on building institutions, that people are tired of being lied to and of being fooled, that it is a lie that anyone who wants medical attention can have it, that the patient no longer can afford to pay what the doctor has to charge, that if the doctor does not find the way by which expert work can come within the reach of all, they will. You have been aware for some time of the effect of the impression slyly left, "we have something for you which you can't get anywhere else."

Nurses in industrial nursing, school nursing, public health nursing, state medical school propaganda work, have helped to spread the glad tidings.

Compensation laws with all their disagreeable features were passed while the medical profession stood in wild-eyed rebellion saying, "they can't do it", but they did.

The increased cost of sickness to the individual brought about by the increased cost of medical diagnosis, nursing, hospitalization, has led to a demand for lower costs and has found its answer in the propaganda of the wily physician who has made a failure of practice, the nurse who despises private case work, the social worker who draws a good salary for attacking the medical profession as the least dangerous opponent and the most obvious person on the scene, the faddist engaged in the noble profession of uplift work, the uninformed laborer who thinks he is going to boss the doctor, the politician who thinks he is going to stay in office by offering the people something for nothing, the lodges which offer much for little, and the poor blind innocent who knows only enough to turn her head parrot-like and squawk state medicine.

We also hear occasionally from the women members of the profession. Dr. Philbrook of Lincoln, Neb. (I apologize for quoting her), says that no male member of the profession is fitted for treating women and children, further saying in regard to the Shephard-Towner bill, "seriously it is a matter of rejoicing that at last in the march of social and political evolution a public fund for the amelioration of maternity and infancy is to be administered by persons

possessing not only the highest social and medical training but also the inherited instincts of age long motherhood". I quote this to ignore it, but at the same time to call attention to what silly prattle can be used for propaganda which may with unthinking people cause an unwholesome influence.

The Rockefeller Foundation, rich in money which you and I have helped create through our forced tribute to a system not to our liking, has for the purpose of creating a school of public health given millions to Johns Hopkins, whose purpose we can only guess through its attempt at controlling and regulating fees. Such foundations, dangerous in a democracy, may, through gifts to institutions, mould public opinion.

New York State in its legislature has just killed a bill to meet the requirements of the Shephard-Towner bill. Such bill will be introduced in other legislative assemblies. Other bills in regard to medicine and health are to come up in the various legislatures and in the next session of congress.

I have briefly stated past, present and future movements whose purpose was or is to mould public opinion in favor of some form of state medicine. I understand you were told state medicine is dead. In the light of what you are reading every day, of what you are observing; in view of the fact that some of the officials of the A. M. A. are nasty when their vision or purpose is questioned, and that the A. M. A. is to discuss its attitude at the coming meeting; in light of the fact that a recent communication to me from Samuel Gompers says the American Federation of Labor has never stated its position but will have a committee report and discussion in June at its Cincinnati meeting—do you believe state medicine is dead? I do not, and I beg of you not to believe it. Let's not be ostriches, sticking our heads into the sand. While we sleep, or fume and fret with each other over petty affairs, state medicine is insidiously creeping on, and some day we shall awaken to find a new system with which we had nothing to do with the making. No, it is not dead, and I, for one, shall not rest until it is dead and buried and its vault so closed that no social angel can roll the stone away. Why does it not die? Does a bona fide health problem exist? It either exists or the socialists, social workers and bureaucrats are making a concerted attack upon the medical profession in the creation of a new division of labor from which they expect to derive many good paying jobs. I cannot quite bring myself to believe that it is merely a conspiracy for the creation of salaried jobs for women and men who hold themselves above standing behind ribbon counters, and yet it is sometimes not clear if these

self-styled promoters of the evolution of society, both lay and professional, are really interested in health, why they make their chief attack upon the medical profession instead of upon the economic system, the legal system, drugstores, housing, Christian Science, chiropractic, etc., unless it is because they see in the medical profession the most weakly organized opposition, and because it is only the medical system which the social worker intends to socialize and supervise.

My ten years of experience with social workers of every known classification has led me to believe that the social worker hopes sooner or later, in a state system, to control and supervise a great part of the medical profession and practice. It does not touch the situation for the medical profession, drunk in its own conceit, to sleep soundly on, oblivious of the changing, seething mass of humanity. If we were living and dealing with nobility, we might justify our attitude of noblesse oblige. But society still exists much in the animal stage.

I believe there is a problem or condition existing which demands the earnest thought and analysis of the medical profession. The question of the poor, which we have had always, is not now the only one to be considered. Our social, economic, industrial organization is no longer simple. So now, with the wonderful growth and complex development in our industrial system, with millions of people, with the development and evolution of our various systems in mass, losing sight of the individual, with the increasing costs in hospital, medical, surgical, diagnostic and preventive care, with the newer ideas as to the value of human life and good health, the question is—do the existing measures and means adequately fulfill the demands? A great many individuals and organizations do not, and we shall see briefly on what basis they have tried to solve the problem. Insurance companies, organized for profit, use the doctor merely as a servant in the formation of profit and their solution has not been encouraging to the medical profession. Lodges offer contract practice at a fee, usually so small the doctor shirks thorough work to the patient. Charity organizations offer contract practice or ever increasing burdens. And the howls of the medical profession from this burden has placed a big stick in the hands of state medicine advocates. These advocates are quite solicitous of the welfare of the profession. They are saying it is not right for the doctors to have to care for all these people for nothing. They know the alternative is a state system with many good social jobs. We know the state rarely pays well where it should. We know the doctor would be underpaid, subject to call day or night at the whim of the patient or social worker,

and be subject to fines and control. Regardless though of how humorous this solicitude for the profession's well being is, it is telling, and the medical profession will sooner or later have to decide between the two or offer something constructive. Social service and public health nursing associations are really not so much concerned with the system just so it promotes their growth. They champion the cause of the patient as against the doctor. The chief fault here lies with the doctor or profession for not having enough constructive lime in its constitution to compel right relations. Industrial organizations are profit seekers with a desire to subordinate *everything* to industry. The U. S. P. H. department, in accepting rich and poor in its clinics, is developing a system detrimental to the profession and ultimately to public health.

Now what is the medical profession to do? Are we to be stampeded or magnanimous? Are we to listen to the words of the wily, and be deceived into believing there is no problem and no use to act or worry? I think we Americans are often inclined to live in an atmosphere of illusion. At any attempt of one to pierce this canopy of illusion we shrink. Especially as doctors of medicine, perhaps through the example of the A. M. A. officials, we assume an attitude of "the king can do no wrong". But illusion is not successful and if we do not bring ourselves into the light, and if we leave it to others, we will be groping and singing the old song, "Lead Kindly Light".

The social cry is now for good health, that it is only one of many human problems, and if we do not tackle it, industry through the help of hundreds of interested agencies, private, state and municipal, will—for at the present time they have their eyes riveted upon this problem and are so charmed they cannot remove them. We must become the charmers. We must direct both for the profession and people the trend for health education, and in many respects reverse the present trend. Instead of the Prussian idea, God save, we must substitute the more correct idea of a vague term standing for that which should be but often isn't. Many seem not to know that "the state" or "government" separated from the halo of idealism and patriotism, disillusioned itself into a mere ruling political set. We must show the people that the happy and successful treatment of disease and misery is personal and individual; that it cannot be done happily en masse, like the turning out of Ford cars; that any clinic system or state system breeds quantity and not quality; that such systems will not change human nature, either in doctor or patient; that such system has failed where tried; that in Austria the system broke down early and left the doctors as mere hangers-on and the people without service; that

in England the doctors now carry it on only through patriotism and devotion during the period of reconstruction.

We must not only educate the layman, but overcome the layman's educating the profession, for we must not forget, as Mr. Pritchett relates, that as a matter of fact the practice of medicine, the profession of medicine, since historic time, has been affected almost as much by the layman as by the profession. This as I think, and as I think Dean Emerson in his most interesting and instructive articles on the history of medicine has shown, is extremely dangerous. Further with Mr. Pritchett, the layman cannot distinguish between medicine as science and as an art of healing. He fails to understand the development of medical education along the lines of highly scientific training. He does not conceive medicine as we do, nor is he in position to appreciate much other than the obvious and spectacular. Due to his confusion of thought, he suspects as selfish on our part every legal restriction asked for his own protection. He does not understand why all treatment of disease should come under legal restraint rather than being bred upon one's own belief, religious or otherwise. He can't understand why all matters pertaining to health, individual or public, should be under the control of the medical profession. Even in the profession some can't see why all aids to health, as nursing associations, boards of health, societies, and lodges, should so far as they pretend to promote health first, meet with the approval of the medical profession.

It is an honor to be president of any medical society, but it would be a greater honor to be the president who made his society a vital educational force, with a strong committee on civic policy, divided into sub-committees to look into all matters affecting the profession and the health of the individual, such as private laboratories and clinics, advertising doctors, insurance and compensating companies, civic organizations, municipal and state boards of health, medical colleges, hospitals, publicity in the press, to help regulate ethics, to report to the society and through the society to give out such publicity as will help educate the people.

In regard to the education of the profession, the undergraduate medical school can improve upon the art of teaching, the choice of text books, and the relation and correlation of studies. They can separate postgraduate and undergraduate teaching, cut out the fraud in research work and postgraduate work, cease taking the time of the interne or student in research before he is half qualified in diagnosis, that is, if he intends to practice medicine. College officials and A. M. A. standardized patternmakers should remember that the primary and

fundamental duty of the medical college is to train men to practice medicine and that the general practitioner is the backbone of public health.

If colleges do not adjust their curricula, stop working against the doctor they create, they will soon find themselves working against the people who support them. For some reason the medical profession has not learned how the physician can be a physician, a citizen, a teacher, without incurring the ill will of his fellow doctors. If he is to be branded as a solicitor because he tries to educate the public then the medical societies, boards of health and the medical colleges must assume the position of chief instructors to the community in all things pertaining to health. But the medical colleges cannot wholesomely perform this function, nor the medical profession well tolerate, so long as the college teacher is paid to educate and at the same time be permitted to compete in practice. His advertisement gained at community expense gives him an unfair advantage over the practitioner who is handicapped by professional ethics. Regardless of arguments to the contrary, in a broad sense, as a matter of continued policy and not in a selfish or political sense, I believe such policy unwise and undesirable. Men should take a part of their pay in the honor of their position, and trust, if they so desire, to increased earnings for having held high places of honor and ability. The medical profession should not subscribe to state boards socializing any part of medicine under the plea of education and public health. Boards of health should strive not to force the expense of private health upon the state under the guise of public health. Their supervision of private health and practice will stop progress in medical treatment.

I do not know who was the originator of the idea of state medicine, whether it came from within or without. But I do know there are individuals within and without the profession who are striving openly and covertly to force it upon the people. The president of the National Nurses' Association, in reply to the professional criticisms of Dr. Mayo, rushed to the lay press. John A. Lapp, editor of *Modern Medicine*, went from Chicago to Albany to aid state medicine. Michael Davis of Cleveland and others are fighting for free health clinics and centers. Different individuals and organizations are solving the problem to suit their own desires. We see they offer us nothing. We see we cannot fully trust medical colleges, health boards, insurance societies, U. S. P. H. activities, Red Cross maneuvers, Rockefeller, Carnegie, or any other rich man's foundation, industrial or political organizations, in fact, we have seen we can trust no one but ourselves, and it seems sometimes there is some kind of worm gnawing in our own hearts. We know we have the problem

of the pauper, we know the increased cost has made it hard for the middle class, and by way of compliment let me say the reason there is a good solid middle class is because it has been most let alone.

We sympathize with upholders and reformers, at heart unselfish, but they have become so well paid we mostly distrust. We distrust if we see the monkey in the woodpile and if we do not see him we say he is there just the same. We sympathize with the agents of the Federal Government in a desire to promote the health of the country but not in Federal supervision as in the Shephard-Towner bill. Nor do I believe in the ultimate efficiency of federal bureaucracies supervising state activities under the guise of federal aid or for any state or municipal bureaucracy to supervise the practitioner. Such attempts are un-American, attempts to change our government, and exceed the limitations upon the federal power fixed by the constitution. The Shephard-Towner bill in my opinion would be declared unconstitutional were it decided according to the constitution instead of political sentiment.

We may have to strike at the cost of medicine to the people but not where the lowering of cost will reduce the impetus to scientific medicine. The cost of hospitalization, accessories in diagnosis and treatment can be reduced. The demand for the nurse is as different as the demand for the practitioner and specialist. If every nurse is a \$40.00 nurse and every doctor a \$25.00 doctor then the cost is too much for many and we ourselves are opening parking places for state medicine. We must find some way whereby the private practice will be more enticing than a federal clinic. We have seen how young graduates went out over the country to various clinics as specialists when in many instances the only qualification as specialists they had was the holding of a federal job in a special clinic organized by bureaucrats. Perhaps we must have more thought for the young men of the profession. Besides adding fuel to the fire of state medicine it does not show a magnanimous spirit to pull the ladder up behind us or to kick out the rounds by which we climb. We must get to the taxpayer in the right light. Right now would be a good time for the farmers to know what state medicine means. Soon as they learn they will find a better way than free treatment and free bed and board for the immorality of men and women. When they know the medical bureaucratic system in England—and which everybody hates—cost the country \$100,000,000 a year and is increasing and will cost us ten times more, they will help us find a way out.

The cry from the masses of people for state medicine comes from the interested group in

each county. The real mass know not what is going on.

But the pauper must be cared for, nor will industrial development be hindered by a procrastinating medical profession. We must come out from behind our intrenchments of the past, realizing that a demand for new relations between the public and doctor is being made, that we cannot sulk in our tents and expect outsiders to settle this demand perfectly satisfactorily to us, that we must take our share in the responsibility, both in the interest of the profession and public, and we can do this only by pointing the way.

We must bear in mind three things—there must be the opportunity for health for every person, protection for everyone against those who do not avail themselves of the opportunity and there must be encouragement for the profession by rewards commensurate with its services. The health problems belong rightfully to the medical profession. This is the portion of man's burden which it must carry. The successful adjustments of such problems and duties as confronts it from time to time will be its answer to society for its stewardship. The medical profession should come together with competent leadership carrying this through the

county, state and national societies. But it is time to count heads. We must know where our delegates stand and they must represent the society and not necessarily their own wishes. We must not permit, in the plea for suffering humanity, a bureaucratizing of essential workers. If medicine is not essential it should be abolished, but if it is essential, then it should be as untrammeled as private ownership and have perfect freedom of initiative.

In conclusion, I have tried to show.

1. The elements at work creating the problem,
2. That they have created a problem,
3. What some have done to solve the problem,
4. That no one has considered an untrammeled medical profession in the solution,
5. That it is our problem and unless we wake up, some charmer like Bryan, Hoover, Hayes, will beat us to the answer,
6. That we can solve it through education and organization.

In conclusion, fellow practitioners, I repeat my text—"He that is not with me is against me, and he that gathereth not with me, scattereth abroad."

REMOVAL OF DIPHTHERITIC EXU- DATE FROM LARYNX

In taking cultures directly from the larynx, Charles A. Thomson, New York (*Journal A. M. A.*, April 22, 1922), states he has frequently noted that the dyspnea was caused either by loose membrane, which was drawn into the lumen of the larynx by inspiration, thus occluding it, or by a thick mucopurulent material which the patient seemed unable to cough up. In only a small number of cases was the dyspnea due to the attached membrane alone or to an inflammatory stenosis. It was further noticed that this loose membrane came away frequently on the swab; the coughing that followed the withdrawal of the swab frequently expelled the mucus, with the result that the child, who was sometimes ready for intubation, received immediate marked relief; this relief lasted in some cases for from six to ten hours. This observation led to devising means whereby this obstructive material, which tends to recollect after a number of hours, could be removed more thoroughly, thus saving many patients from intubation. A specially devised applicator is used under direct laryngoscopy. It is passed into the larynx just below the cords, and immediately withdrawn. The withdrawal of the swab acts somewhat like the plunger in a syringe, bringing with it a large amount of the mucus and frequently good sized pieces of loose membrane. The result of this procedure was surprising in many cases; patients that were cyanotic and

perspiring received as much relief as from intubation—relief that lasted from eight to ten hours, and in some cases was permanent. During this period the child could take nourishment easily, had several hours' uninterrupted sleep and, as a result, his general condition remained much better than if intubation had been done. Usually the applicator treatment had to be repeated two or three times and, in two cases, four times. In no case has pneumonia developed as a result of the treatment, nor did any accident occur from pushing the membrane down the trachea. It was noted, further, that aphonia disappeared earlier in these patients than in those in whose cases intubation was performed. Only those patients were treated who would otherwise have required intubation.

DESENSITIZATION OF HAY-FEVER PA- TIENTS BY SPECIFIC LOCAL APPLICATIONS

GEORGE M. MACKENZIE, New York (*Journal A. M. A.*, March 18, 1922), claims that the reactivity of the nasal mucosa of hay-fever patients may be markedly diminished by spraying the nose and throat with the specific pollen antigen. In a series of patients given specific prophylactic treatment by this method, the results compared favorably with those in a series of patients treated by specific subcutaneous injections, but were less satisfactory than when a combination of the two methods was employed.

**THE JOURNAL
OF THE
INDIANA STATE MEDICAL ASSOCIATION**

Devoted to the Interests of the Medical Profession of Indiana

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Office of Publication, 406 W. Berry St., Ft. Wayne, Ind.

MAY 15, 1922

EDITORIALS

PROTEIN THERAPY

"Resistance" to infection, in its implication of biological reaction to bacterial invasion, has long been considered a strictly specific phenomenon. Theory and laboratory experimentation were largely responsible for this point of view. Only recently Wright has admitted that clinical results have at last forced him to conclude that "inoculation produces in addition to 'direct' also 'collateral' immunization".

William F. Peterson in his "Protein Therapy and Non-Specific Resistance", recently published, says: "It was the clinic that forced upon our attention certain therapeutic results which could not be ignored." With these results we must grudgingly admit we are all more or less familiar—grudgingly because of our antagonism to the introduction of phylacogens, "shotgun vaccines", on what we considered empiric grounds, and to stock vaccines because we believed that the process of immunization varied with different strains of the same bacteria as well as with different species of bacteria. For several years, however, both the laboratory and the clinic have been producing evidence tending to show the marked similarity of all biological reactions to parenteral proteins.

Renaud in 1911 showed that typhoid vaccine had a beneficial therapeutic effect upon a number of non-typoidal inflammatory processes; Kraus that colon vaccine had practically the same result as typhoid vaccine in the treatment of typhoid. Ichikawa treated paratyphoid successfully with typhoid vaccine and Kraus reported favorable results in puerperal infection treated with colon vaccine as long as ten years ago. From these beginnings the evidence has rapidly accumulated until the use of stock vaccines is commonly accepted, the treatment of arthritis by intravenous typhoid vaccine universally recognized, and the injection of various foreign protein substances such as milk, casein, serumalbumin in the treatment of inflammatory conditions admitted as theoretically and practically sound.

Nor is this illogical if, as Peterson points out, "we keep the focus of our attention on the reaction of the body to injury—on inflammation

—we find that this reaction, no matter how produced—be it bacterial invasion, intoxication or trauma—is fundamentally similar under all circumstances". In all such processes, however, they may vary in the type of cellular reaction, the amount and composition of the exudate, we are dealing with an effort "to dilute the noxious agent, to remove it by intracellular or extracellular digestion, to neutralize it or to wall it off".

From a therapeutic standpoint but two avenues of approach are open in the presence of a cause of inflammatory reaction. We can attempt to destroy the causative agent by introducing an antitoxin, antibacterial agent or chemical; or we may confine our efforts to altering the inflammatory reaction of the body itself. The latter explains the reason for non-specific protein therapy—it is a therapeusis whereby we alter the reaction of the organism to the etiologic agent by promoting or retarding autolysis by hastening resorption and the reparative processes—and as such its *raison d'être* can fairly be said to have been established beyond question.

PREVENTION AGAINST DIPHTHERIA

Medical men have not attached sufficient importance to the subject of the control and prevention of diphtheria. All have known of the inestimable value conferred upon humanity by the discovery and use of antitoxin, which has so greatly reduced the mortality, but few seem to appreciate the newer development in diphtheria control brought about by the discovery of the wonderful protective effect of toxin-antitoxin. Heretofore we have been content to give small immunizing doses of antitoxin to children who have been exposed to diphtheria, but such injections only protect the children for about three weeks. On the other hand, toxin-antitoxin protection lasts for years and probably for life. This result is secured in much the same manner that protection by antitoxin is secured, namely, by the injection of small doses of sterile serum into the arm once a week for three weeks. It is claimed that this makes the child as safe from diphtheria as vaccination does from smallpox, and it is asserted by prominent clinicians and public health officers that if every child between six months and five years of age could have this treatment, diphtheria eventually could be wiped out. Until this protective treatment is rather universally used, diphtheria will continue to prevail in various communities with a varying death rate, depending upon the promptness and certainty with which antitoxin is administered. The safety and effectiveness of this protective measure has been established beyond the question of a doubt, and it only remains for the public to become conversant with the facts. The dissemination of the knowledge must come through not only the activity of

health boards but the personal influence of family physicians who come in direct contact with people. The results to be secured are certainly worth while.

DEATH OF DR. EDWIN WALKER

In the death of Dr. Edwin Walker, at his home in Evansville, on April 23, 1922, not only does Evansville, but Indiana and in fact the Middle West, lose one of its most capable surgeons and enterprising citizens, beloved by all who came in contact with him. Dr. Walker had the distinction of being an indefatigable worker, with a mind centered upon scientific achievement and the good that can be done to humanity, and of lofty ideals in his intercourse with his fellow men. He was honored by the American Medical Association in serving as its vice-president. He served as president of the Mississippi Valley Medical Association, and his own State Association honored him many years ago with the presidency. He was at all times devoted to the best interests of the medical profession, and his loyalty to his friends was especially noteworthy. He not only has perpetuated his life's work through the establishment of a hospital which bears his name, but his achievements in the interest of scientific medical progress and in allaying the sufferings of humanity have left an imprint that will long survive.

INDIANA UNIVERSITY SCHOOL OF MEDICINE SUMMER COURSES

Postgraduate courses will be offered during the coming summer by the Indiana University School of Medicine, Indianapolis, during the six weeks' period, June 8th to July 20th, 1922.

Courses will be offered by the Departments of Pathology, Pharmacology, Medicine, Surgery, Gynecology, Genito-Urinary, Rhinology, Otology and Laryngology, Ophthalmology, and Dermatology and Syphilology.

The Department of Medicine will offer a course in internal medicine which will consist of ward rounds at the Robert W. Long Hospital, including methods of medical laboratory diagnosis necessary for the study of patients on the wards.

Clinical work in surgical diagnosis will be offered; also work in surgical pathology. In the former case, whenever indicated at operation, the opportunity will be given to prove or disprove the diagnosis. In the work in surgical pathology, special stress will be laid upon gross pathology and upon the relation of the pathological condition to the clinical picture. Also the prognosis as determined by the pathological diagnosis will be discussed.

A course in biochemistry on some of the more

recent chemical methods includes the analysis of the blood, determination of acidosis, detection of diabetes and hyperthyroidism by the determination of the sugar tolerance and the basal metabolism will be given. The work will consist of lectures and practical laboratory work.

The Department of Pathology and Bacteriology will offer courses in pathology and disease production and resistance.

The course in pathology will cover pathological changes in general, and those changes characteristic of the more common diseases, including various infectious diseases, cardiac, arterial, renal and glandular diseases, anemias, leukemias, neoplasms, etc. The course will occupy six weeks, with five lectures per week followed by laboratory periods. Study will be made of the gross and microscopic features of pathological material illustrative of the changes discussed. The projectoscope will be used for demonstrating microscopic changes in the sections to be studied. Those enrolled in this course may attend all autopsy examinations made by the officers of this department during this period.

The course in disease production and resistance occupies six weeks with three lectures and three laboratory periods per week, and will summarize the present understanding of the mechanism by which various disease manifestations are produced, and the reaction of the body to the various forms of injury. The major portions of the discussions will relate to diseases of bacterial origin, but the pathological physiology of toxemias, mechanical injuries, burns, neoplasms, and diverse other disease processes will be presented. Stress will be laid on the reaction of the body to the various forms of injury, and the relation of this reaction to the course of the disease and to symptomatology. The principles of immunity and the application of the various serological tests and other immune reactions to diagnosis will be presented together with the relation of serum and vaccine therapy to the mechanism of the body's resistance.

The courses to be offered in gynecology, genito-urinary diseases, rhinology, otology and laryngology, ophthalmology and dermatology and syphilology will consist of two two-hour periods per week. Both hospital and dispensary clinical material will be available for these courses.

For the benefit of physicians who are able to give full time to the work, an effort will be made to arrange the schedule so as to permit the taking of as many courses as possible.

Since the number of students enrolling in these courses must necessarily be limited, and also that the giving of the various courses is dependent upon the number of applicants for each course, it is urged that those desiring to take the courses apply at once to the Registrar,

Indiana University School of Medicine, Indianapolis, for registration card, indicating the courses desired.

For further information address Registrar, Indiana University School of Medicine, Indianapolis.

DISCRIMINATION AGAINST AMERICAN PHYSICIANS IN VIENNA

If anyone believes that the Germans are not treasuring a grudge against Americans, all he has to do is to read the statement issued by the officers of the American Medical Association at Vienna to American physicians who are thinking of taking postgraduate work in Vienna. This statement, which is duly signed by the officers, is as follows:

VIENNA, March 24, 1922.

TO AMERICAN PHYSICIANS:

The American Medical Association of Vienna was established 1904.

The objects of the Society are to promote the social intercourse and the scientific advancement of its members, to provide information in regard to the scope and relative value of courses, and to furnish data for the rapid orientation of new members in regard to pensions, rooms, restaurants, etc. (Article II. of the Association's Constitution).

It also regulated, in agreement with the teachers, the different fees charged for post-graduate work, and arranged all the courses taken by American doctors. It worked to the satisfaction of both the American doctors who came to Vienna for post-graduate study as well as for the teachers of the Vienna University. A great many courses were placed under the control of the A. M. A. of Vienna, as far as their personnel, number of members, and hours were concerned. These were called bookcourses and were given for a fee approved of by the Society. The so-called "Blue Book" comprised all these courses and explained how they were conducted. The Blue Book was issued every year on January 1st, and the members of the A. M. A. of Vienna as well as the teachers abided by its rules. It was not only the quality of the teachers but also the propaganda which the members of the A. M. A. carried on in the States that made Vienna the hospitable home of 300—400 American doctors every year. Things ran smoothly most of the time up to 1914 when the war broke out. During the war, Dr. J. Lange, a former president of the A. M. A. of Vienna, remained in Vienna and had the misfortune of breaking down physically as well as financially. The lecturers in recognition of his services and probably also in expectation of Dr. Lange's sending back 150 American physicians to Vienna, as he promised, made up a purse with which to send him home to Chicago. They also defrayed the expenses of a Blue Book, which he had compiled without any authority whatever from the A. M. A., and in which he printed exorbitant fees for the courses to be given by the various lecturers. This is the Blue Book of 1919.

These preliminary remarks, we find necessary for the full understanding of our present unfortunate difficulties with the Vienna Faculty concerning fees charged for courses.

In the summer of 1921 about 12 American physicians came to Vienna to take courses, and first began to complain about the fees they were asked to pay. They were charged all the way from one to ten dollars for one hour.

The discrimination which was going on against American physicians became unbearable, for it was a twofold discrimination. To understand this, you must know that two sorts of courses were being given at the clinics.

1. Courses read in German and accessible to doctors from any part of the world. For these courses, the lecturers charged the Austrian physicians about one-fifth of what they charged physicians coming from the newly formed republics of dismembered Austria. Such physicians were called (Neu-Auslander) "new" foreigners. Doctors, however, who came from countries like France, Switzerland, Holland, England, etc., were called (Alt-Auslander) "old time" foreigners, and they were charged ten times as much as the Austrian physicians who happened to take the same course.

Our men, as long as they were not asked to pay more than the so-called "old" foreigners, never refused to pay ten times more than the Austrian doctors. But they did refuse to pay more than the "old" foreigners (Swiss, Dutch, Italian, French, etc.). They could not understand why they should be considered better off financially than the Swiss or Dutch for instance because the franc and Dutch guilder increased in value in the same ratio as the dollar.

2. The other possibility open for the American doctors to take courses was for them to club together, but since there were often only a few Americans present such courses would seldom comprise more than two to four members. When the teachers were engaged, the Americans were charged three, four, five or even twelve dollars per hour, regardless of whether the course was given in German or English. That means the teacher got for his working hour, if he happened to work for American doctors, three to twelve dollars, which in Austrian crowns in August, 1921, amounted to 3000—12000 crowns. This same teacher, teaching the very same subject, would sell his hour, according to the printed official program for post-graduate work issued by the Vienna Medical Faculty, for 2500 crowns to any other foreigner, and 250 crowns, at the most, to an Austrian. It was, therefore, evident that, no matter whether the American physicians took courses jointly with physicians of other nations or had them arranged for themselves only, they were unjustly discriminated against.

Under such conditions it was but natural that the former American Medical Association was reorganized, and a president elected who, owing to his Vienna origin, was thought to be capable of adjusting the matter. The president had a committee work with him and after August 28th many joint meetings were held with the representatives of the teaching body of the University. In these meetings, the unjustified and unfair attitude displayed toward the American physicians was thoroughly discussed. The committee brought detailed charges of conspicuous discrimination against American doctors. On Nov. 19th the American physicians offered a maximum fee of three dollars for the teacher's hour, proving absolutely that three dollars was 4 to 10 times more than any other foreigner was asked to pay for the same course by the same teacher. The committee also proved, in a detailed memorandum submitted to the teaching body Nov. 19th, 1921, that three dollars per hour in Vienna was a great deal more than ten dollars paid to the best teacher in post-graduate work in New York. It was proved that the Viennese teacher could buy more for three dollars in Vienna than the American teacher could for ten dollars in New York. It was further shown that, if the terms as proposed by the A. M. A. of Vienna were accepted by the medical teaching staff, many more

American doctors would be induced to come to Vienna for post-graduate work, and would thereby re-establish the highly satisfactory pre-war organization.

After prolonged debate and negotiations the terms were acceptable to all departments with the exception of eye, ear, and skin (Clinics Meller, Neumann, Dünner, Finger, Riehl). Without the cooperation of these clinics, however, a satisfactory organization would be impossible, for 75 percent of the American doctors are directly concerned with these departments.

Since our many attempts to reconcile the relationship between the docents and the A. M. A. of Vienna have been unsuccessful in procuring a definite agreement, we feel it our duty to let medical men in the United States know what sort of discrimination is taking place against American physicians.

We have requested the U. S. A. Legation in Vienna to intercede and endeavor to change this lamentable state of affairs, but we have little hope of any success in this matter.

P. S.:—We shall ask the *Journal of the A. M. A.* in America to print this statement to correct the impression conveyed in the letter written by Dr. G. H. Kress of Los Angeles, Cal., which appeared in its Correspondence Column Dec. 31st, 1921. Dr. Kress on leaving Vienna was in full knowledge of the condition described above—in fact he was the author of the memorandum presented to the teaching body of the University of Vienna on Nov. 19th, 1921, enumerating all the facts given above—but we surmise that Dr. Kress on leaving Vienna had hoped that the teaching body of the University of Vienna would surely not turn a deaf ear to the just complaints of the American physicians.

A FEW ILLUSTRATIONS OF DISCRIMINATION

In the official program of the Viennese Medical Faculty for post-graduate courses to be given October, November and December, 1921:

Docent Elias announces a course for metabolic disorders; fee 500 crowns per hour of his time (if taken by Austrians); the same course he offered to the A. M. A. for five dollars per hour, or according to the exchange value of the dollar at that time 40,000 crowns per hour!

Docent Stein announces a course for skin diseases and cosmetics; fee 400 K per hour of his time (if taken by Austrians); the same course he offered to the A. M. A. for five dollars per hour = 40,000 K per hour from Americans!

Docent Denk announces: "Selected Chapters from Special Surgery" for 250 K per hour of his time (if taken by Austrians); from the A. M. A. he asks five dollars per hour of his time = 40,000 K!

In January and February, 1922, when the dollar went up to 9—10,000 K in exchange:

Docent Hirsch asked in his course, "Anatomy and Pathology of Nose and Sinuses," from old foreigners 6000 K for one hour of his teaching time, from Americans four dollars = 36—40,000 K.

Prof. Kyrie, in a skin course given in February to 2 Swiss, 1 Egyptian and 3 Americans, asked 30,000 K from the Swiss and Egyptian and 60,000 K from the Americans—and they paid it!

Sincerely,

P. S. GRAVEN,
W. G. SAHR,
F. F. SCHMIDT,
JOHN PENNINGTON,
T. L. BLANCHARD.

DETROIT APPEARANCE OF LORENZ, WEDL & CO.

Now that the curtain is about to go down on the Lorenz vaudeville show in Detroit, the blessings bestowed on our cripples by our distinguished Austrian visitor may be appraised with some regard for the actual facts, and with some hope of enlisting popular interest therein.

Dr. Lorenz has not performed a single operation, public or private, that could not be as well done by five of Detroit's orthopedic surgeons. In the course of the day's work these Detroiters do everything that Lorenz can do.

Dr. Lorenz's widely advertised Lolita Armour case in Chicago involved precisely the same operation that had previously been performed by a Detroit surgeon who is still in practice.

Dr. Lorenz's reputation for his treatment of congenital hip trouble, as first revealed by an Italian doctor, was well deserved in its day; but there are men in Detroit, and all over America, who are quite as adept in administering the same treatment now. Chicago surgeons report that of 26 dislocated hips operated on by Dr. Lorenz on his last visit to America, only two had been successfully reduced.

Dr. Lorenz limited his free clinics in Detroit to the simpler cases, including those that appear spectacular, thus reserving more difficult cases for private inspection, provided the patient was able to pay his fee.

Dr. Lorenz collected \$100 in advance from every private patient he saw in New York, whether he could do anything for the patient or not. He told a New York newspaper that his "receipts of a single day were never as much as \$3,000". His Detroit fee for private patients has been reported at \$50 and upward, according to the patient's purse.

Dr. Lorenz's operations depend for their success, as do all such operations, not on the skill of the operator alone, but on subsequent treatment, which must continue for two years on the average in orthopedic cases. Some of our own orthopedic surgeons refuse to operate on patients outside their own city rather than risk the failure of subsequent treatment.

Dr. Lorenz has not done anything for charity in the treatment of Detroit's cripples that is not done every week by Detroit's orthopedic surgeons, and every year by other orthopedic specialists whom they bring here for open clinics.

Dr. Lorenz was brought to America by Anton Wedl, a New York lace importer, and another New York business man whom Mr. Wedl does not name. Dr. Lorenz says he came to repay Austria's debt for America's care of Austrian children. Wedl handles all the money Dr. Lorenz collects.

If that money goes to the relief of Austrian children, as has been assumed by some, Dr.

Lorenz and his financiers are not repaying their debt to America, but increasing their obligations.

If it goes into the pockets of Lorenz, Wedl & Co., America will occupy a high place on the sucker list of a professional gentleman engaged in feathering his own nest in the name of philanthropy. That may possibly explain why Dr. Lorenz and his colleagues neglected so many American prisoners in Austrian camps and turned them out with deformities instead of sound limbs.

At any rate, taking up a collection has proved to be an essential part of the Lorenz program in Detroit and elsewhere. He does not even stop at attaching his name to an advertisement for corsets.

Scientifically speaking, the difference between Dr. Lorenz and our own orthopedics is a difference in stage effects dramatically and freely furnished our distinguished Austrian visitor by susceptible newspapers.—Editorial *Detroit Saturday Night. Journal Michigan State Medical Society.*

LESSONS FROM LORENZ

Before Dr. Lorenz visited Detroit, prominent medical men throughout Michigan were seeking some means of securing legitimate publicity on medical affairs without violating the ethics of their profession. Their problem was to offset the commercial advertising of the quacks by carrying medical truth to the public without commercializing their profession by buying advertising themselves.

The need of the medical profession for legitimate publicity, and the value of it to the public, were impressively demonstrated by the results of the free publicity accorded Dr. Lorenz in American newspapers. Many intelligent people had never heard of the possibilities in orthopedic surgery until Dr. Lorenz appropriated a large percentage of the newspaper headlines. Comparatively few people knew that there were orthopedic surgeons in Detroit and other American cities quite as skillful as Dr. Lorenz, or that these surgeons were doing their full share of free clinical work.

Popular interest in Dr. Lorenz has a broad educational value, and will continue to have during the months that his patients must rely on local practitioners for treatment. Dr. Lorenz himself recognizes "amazing skill among physicians" in Detroit. Dr. Kidner of Receiving Hospital announces after x-ray examination that Dr. Lorenz did not effect a complete cure in any of his operations at that institution, and a more notable fact is that the cases Dr. Lorenz selected for operation were among the simplest. Nevertheless, the staging of the Lorenz operations in such a dramatic way as the newspapers

have done it has produced a sort of revival in orthopedic surgery in Detroit and elsewhere.

Yet Dr. Lorenz's specialty involves only one branch of medical practice. There are many others that the public knows as little about. How many people realize, for instance, that it is a common thing for our oculists to straighten cross-eyes? Publicity will tell them; and the kind of publicity devised by the Michigan medical organizations and the University of Michigan for dissemination through the lecture platform and the News Radio Station will be welcomed by unfortunate people in search of health and strength. And it ought to be an effective answer to quackery.—Editorial *Detroit Saturday Night. Journal of the Michigan State Medical Society.*

EDITORIAL NOTES

DFAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

To use a slang phrase, doctors are overlooking some good bets when they fail to read the advertising in medical journals, and we especially call attention to our own advertising pages where announcements of interest to many members of the medical profession will be found. Not infrequently some rather rare bargains in supplies are advertised.

GOVERNMENT reports continue to extol the virtues of carbon tetrachloride as an effective agent in the treatment of hookworm in human beings. It was first used as an efficient remedy for hookworm and related blood sucking worms in animals, and it is only within the last few months that it has been found to be equally efficient in the treatment of hookworm in the human. Fortunately the treatment is unattended with danger, and it is extremely cheap, the chemical being one that is commonly used for cleaning clothing.

IT may be of some interest to the readers of this Journal, especially those interested in

radium, to know that recently Dr. Albert M. Cole and Dr. Raymond C. Beeler have lost, through theft, fifty-five milligrams of radium. This was contained in four needles and one five milligram plaque. The radium was taken from a combination safe, the thief working the combination successfully. Fifty milligrams in two tubes in an applicator was overlooked by the thief, probably establishing his ignorance of radium. It is possible that this thief with a radium burn may come under the notice of some physician with this information in mind.

THAT microbes harbored by rats can induce jaundice in human beings was convincingly demonstrated for the first time recently when a young woman bacteriologist in the State Health Department Laboratories at Albany, New York, became infected by accidentally pricking her finger with the needle of a syringe containing a virulent culture of the leptospira from a rat which had been prepared for the inoculation of a rabbit. Now that it has been definitely proven that rats harbor a germ which will infect human beings, an immediate and relentless war on these rodents should be instituted.

A FORT WAYNE woman has sued a shoe store for five thousand dollars damages because a pair of shoes which she purchased of them had paper heels which suddenly gave way while she was wearing the shoes and precipitated her to the ground with more or less serious injury. So far as we know this is the first case of the kind on record, and while it probably will fail in its purpose, yet it shows the length to which people will go in an attempt to secure something unfairly, though it may be that the matter has been stirred up by a shyster lawyer. It really reminds us of some of the suits for malpractice sometimes brought against physicians without justifiable cause.

RADIUM owners will be interested in a new radium insurance policy which has recently been offered for sale by the Insurance Company of North America. Lloyds of London, who previously handled the major part of the radium insurance, recently raised the annual premium rate to 5 percent. This action met with universal disapproval, and a number of interested Philadelphia physicians set about to secure a radium policy that would give owners protection under all reasonable conditions. The result is this new policy offered by the above mentioned firm, which covers all risk, at a premium of 2 percent per year, but with the payment of but 75 percent of the loss instead of 100 percent.

IN an address delivered before the meeting of the secretaries of state medical associations, Dr. Alexander R. Craig, secretary of the American Medical Association, made a very important suggestion when he said "the council of the State Medical Association should not only serve as a court, but it should also be in fact the active agent for guiding the organization within the State. The councilors personally should visit, correspond with, and through other means supervise and stimulate the activities of the county medical societies". To do this work effectively will entail considerable thought and effort, but if the best results are to be obtained the councilors must be diligent and active in the performance of the duties of their offices.

THE chiropractors and all other pseudo-medical cults are opposing all forms of legislation that have the remotest effect upon the legitimate practice of medicine. They give their support only to such legislation as throws open the doors for all kinds of chicanery and quackery in the practice of the healing art. With true consistency they are opposing Senate Bill No. 2764, introduced by Senator Watson of Indiana, which provides for the transferring of some of the medical officers in the reserve corps to the regular Public Health Service and thus makes for more efficient service through the increase in the number of permanent officers. We shall be interested in knowing just how great the influence of the pseudo-medical cults will be in defeating this very wise bill.

THAT Indiana is waking up to the dangers of some of the medical uplift schemes proposed by erstwhile reformers is evidenced by the fact that the Indianapolis Medical Society, the largest local medical society in the state, has adopted a set of resolutions covering opposition to various forms of medical practice which are paternalistic in character or tend toward State Medicine. The resolutions are published under Society Proceedings in this number of *THE JOURNAL* and are worth reading by every medical man in Indiana. We hope that this step by the most prominent local medical society in Indiana will result not only in serious consideration of some of the evils that confront us, but actual opposition to those enterprises that have as their ultimate end competition with private practitioners and finally the practical abolition of the private practice of medicine.

Now that protection against diphtheria for years and perhaps for life can be obtained by the injection of toxin-antitoxin, much as we protect against smallpox by vaccination, we wonder if the Anti-Vaccination Society will not add to their propaganda a fight against the

newer protective measure. Just why there should be such strenuous opposition to tried and tested methods of preventing such terrible diseases as diphtheria and smallpox is hard to understand. Even by the wildest stretch of imagination the effects of the remedy are less than the effects of the disease, and, except in very rare instances and those usually due to faulty technic or to some coincident cause, no ill effects have been produced by these protective measures. Therefore, opposition to them must be a question of bias based upon ignorance, or, perhaps we might say, pure obstinacy for the joy that is in it.

TYPHOID fever in Indiana has been steadily reduced from 21.2 percent in 1916 to 9.7 percent in 1920 per one hundred thousand population. However, this rate is altogether too high, and there is no reason why it should not be reduced to meet Massachusetts and Wisconsin, which have the lowest typhoid death rate. The amount of typhoid fever in the community is recognized as one of the indexes of its healthfulness, and it also indicates the condition of sanitation. There is no reason why Indiana should be behind a large number of populous states like California, Connecticut, Illinois, Michigan, Massachusetts, Minnesota, New Jersey, Ohio, Wisconsin and a few others which apparently pay more attention to sanitation than we do. This is a subject worthy of the attention of our State Board of Health, with the suggestion that more attention be given to the enforcing of sanitary regulations with special references to health officers in small towns and rural communities.

DOCTORS are interested in good roads and they should use their influence in helping our road commissioners in securing federal and state appropriations from funds now available. We call attention to this matter for the reason that it was reported that in some districts in Indiana it would be possible to build roads without a cent of expense to the people in the vicinity in view of the federal and state funds that are available for the purpose, and yet the residents of these communities are showing absolutely no interest in the matter. In one or two instances the State Highway Commission has even pointed out to some of the prominent residents of certain districts where good roads are needed that an effort should be made to obtain roads that could be secured with little or no local expense. Certainly the doctors who are using roads constantly ought to take some interest in the matter. One of the ways in which this can be done is by joining the Hoosier Motor Club.

THE Harmer Laboratories Company has been scattering broadcast to the medical profession of Indiana literature on Mon-Arsone, "a new and non-toxic arsenical for the treatment of syphilis". The literature states further that with this drug "the toxic, corrosive and uncertain reactions attending the use of arsphenamine have been entirely eliminated" and that "it has a therapeutic value equal to arsphenamine, but extensive case reports fail to record the slightest toxic reaction following its use". Extensive experimental work carried on under the direction of the Council on Pharmacy and Chemistry of the American Medical Association has brought forth the report that the claim that Mon-Arsone has a therapeutic value equal to that of arsphenamine is premature and unwarranted; that Mon-Arsone should not be used except under conditions that justify the experimental trial of an unproved drug; and that the advertising propaganda for the drug by the Harmer Laboratories Company is to be deprecated.

THE high cost of publication is driving many medical journals out of existence either through complete suspension or amalgamation with other journals. Even the old independent medical weeklies are disappearing, and the last of them, the *New York Medical Record*, has been combined with the *New York Medical Journal*, which appears semimonthly. On the other hand, the greatest medical periodical of them all, the *Journal of the American Medical Association*, continues as a weekly and constantly grows in importance, not only from the fact that it goes to such a large number of readers through membership in the A. M. A., but because of its high ethical and scientific standards. It also is true that the State Journals for the most part are growing in popularity and importance, for with few exceptions they are run on a high ethical plane and aim to represent the interests of and to be of real practical value to the readers. There is no longer any room for the purely commercial medical journal and we are thankful that they are passing out of existence.

THE country seems to have gone crazy over results secured from radio phones, and receiving sets are being put into commercial houses and private homes with a rapidity that taxes the manufacturers. The more powerful receiving sets, when properly installed, permit an audience of several people to sit in a room and hear lectures or concerts at sending stations a thousand or more miles away. At present the expense of producing these programs is an advertising venture for various concerns, and eventually when the novelty wears off or through lack of appropriate return on the investment,

these programs will not be given as they are now, subject to the enjoyment of any and all who own receiving sets and without expense. While the present craze lasts there is a wonderful opportunity to educate a large portion of the public in public health matters and we are glad that the New York State Department of Health is taking advantage of the opportunity by giving short public health talks. These talks should be not only pertinent but short and to the point. They should be of practical value in giving information to the public which will aid in the prevention of disease and the preservation of health.

OFFICERS of our county as well as state medical association should set a good example so far as the ethics of the profession are concerned. That their actions are not above criticism is evidenced by numerous newspaper clippings received at this office from various parts of the state which give glowing accounts of operations or other professional attention rendered patients by this or that doctor—full names being given. Usually such newspaper clippings are sent in with such notations as “and this man is the president”—or secretary, as the case may be—“of our county medical society”. As we have stated more than once, whenever you repeatedly see a doctor’s name in one of his home papers in connection with some wonderful operation or other startling professional services rendered, you can make up your mind that that doctor has courted the publicity given if he has not actually asked for it. Any reporter or editor will respect the wishes of any doctor who requests that his name be omitted in connection with newspaper publicity, and there is absolutely no excuse for repeated violation of this phase of medical ethics.

IF Secretary Combs had any doubt about the county secretaries reading the membership statistics in THE JOURNAL, it was dispelled when a letter was received from Dr. Dugdale, secretary of the St. Joseph County Medical Society. In the April number of THE JOURNAL a list was published of the largest county societies in the state, and, through the State Secretary’s error, St. Joseph County was not listed in its rightful position. However, during the month of April, since that report was published, St. Joseph County has sent in enough additional memberships to step them up in the column until now they are in third place. In fact, Dr. Dugdale was the first secretary this year to send in the dues of all of last year’s members. It is perhaps a commentary on the recent migration of physicians to note that the larger societies, Marion County, Vigo County, St. Joseph County and Vanderburg County, have the largest mem-

berships in the history of their respective organizations. It is the less populous counties that have lost some of the few doctors they used to have, and the presumption is that these doctors have moved to the larger cities.

THE legislative committee of the State Association may well consider the advisability of having a paid representative to look after legislative interests in Indiana as they affect the medical profession. The results of the recent primaries indicate the necessity of doing political work prior to the convening of the legislature. We might just as well face the fact that we must indulge in politics if we are going to get anywhere, and act accordingly. Too long have we depended upon intelligence and consistency in the framing and enactment of laws that directly or indirectly affect medical practice, only to discover that the average legislator is not guided by sense or reason but by political influence, and to get under the skin of that type of legislator means that we must take a hand in molding political influence. We can’t do this by pursuing an apathetic course until the legislature convenes and then frantically work to head off iniquitous medical legislation that should have been prevented by earlier and more effective action. We may continue to consider it distasteful to enter into politics, but we are not going to make any real progress or even protect the interests of the medical profession until we do engage in politics, and we might as well begin at this late date. One way to do this is to have paid representatives who at all times will be “on the job”.

AGAIN we desire to call the attention of medical men to the propriety of investigating before paying good money for securities of any kind. Our reasons for doing this are two-fold: First, generally speaking, doctors are poor business men, and the most gullible on earth when it comes to making investments; and, second, right at the present time the doctors in Indiana are being solicited to buy stocks and bonds in an enterprise of questionable value, and to further the sale of these securities among members of the medical profession the solicitors are showing letters of endorsement from several physicians of high standing. No matter what the claims of solicitors may be, nor how glowing the prospectus report may show up financial conditions, it is a wise plan to thoroughly investigate any proposition before investing your hard earned money in it. This means the securing of a statement of assets and liabilities, which statement should be analyzed carefully and proven to be satisfactory from an investment standpoint. Any conservative banker or the bond department of any of our well-estab-

lished banks will determine the safety of any contemplated investment, and if doctors more often would take advice from such sources, and not "fall" for the glib talk of a stock salesman or promoter, they would lose less than they do now from bad investments.

THE American Relief Administration in Russia undoubtedly is doing a wonderful work in relieving distress in that misguided and poverty stricken country. The twenty million dollars appropriated by Congress, and still other means that have been contributed by charitable persons in America, have gone a long way toward relieving the famine infected districts and preventing starvation of hundreds of thousands of peasants, and especially peasant children who suffered most. However, one cannot help feeling a little antagonistic to this relief project in view of the fact that many of those who accept our aid will at the first favorable opportunity turn upon us. Perhaps the bolshevistic leaders already are chuckling to themselves because we have, in a measure, aided their cause. Of especial interest to the medical profession has been the work done by the relief administration in equipping the hospitals with new instruments, medical supplies and surgical dressings so badly needed. In addition to this, daily food rations to the hospital patients and to undernourished children are being furnished without stint. A need that was taken care of to the great relief of sufferers was the furnishing of ether and chloroform for anesthesia. Previous to the furnishing of this relief, each person coming to the hospital for an operation was asked to bring his own anesthetic, but this rule availed nothing, as anesthetics were unobtainable or, in rare instances, at prohibitive prices. Therefore, it became necessary to perform minor operations without administering an anesthetic, and even amputations were performed in that manner, not even the sedative influence of opium being at hand. This work is truly a work of charity, and let us hope that the gratitude shown at the present time may be felt for years to come.

A CHIROPRACTOR has written us relative to our criticism concerning the cult and very pertinently remarks: "If it is wrong to practice chiropractic, why are the states continuing to grant charters for the establishment of chiropractic schools and colleges?" He then goes on to say that perhaps we would accomplish more by preventing the chartering of these establishments than by attacking those who are practicing under the charters that have been granted. We admit that there is some truth in the logic, but desire to point out that a charter merely grants permission to do certain things, and does not prevent the enterprise so char-

tered from doing some things that are in direct violation of laws which have no bearing upon the charters. For instance, a charter may be granted for the teaching of chiropractic, but the actual practice of chiropractic comes under quite another law which prescribes the qualifications of any who practice the healing art. The whole trouble with the chiropractic situation is that the law covering the practice of the healing art is not enforced. We have enough laws but they are not worth the paper they are written on unless enforced. If all of the states in the union had possessed Boards of Medical Examination and Registration with a particle of backbone, and had enforced the existing medical practice acts, we wouldn't hear a word about chiropractors or any other pseudo-medical cults. In the State of Indiana we had an inefficient and spineless Board of Medical Registration and Examination for a great many years. That Board prosecuted and persecuted a lot of graduates of regular medicine because through some technicality or other those medical men were unable to comply with the provisions of the medical practice act. At the same time the Board permitted quacks and members of the pseudo-medical cults to escape, and in consequence we at present have the state overrun with a lot of incompetents who should have been prosecuted for practicing the healing art unless they complied with the laws of the state. Now the number of such offenders is so great that prosecution seems futile, and yet every mother's son of them are law breakers, to say nothing of being incompetents and dangerous to the welfare of the community. The chiropractic teaching is irrational, inconsistent, and based upon the grossest ignorance. Our state laws are for the protection of the people and specify educational requirements that should be exacted of everyone who desires to practice the healing art. The law is eminently fair and makes no discrimination in the schools of medicine when it demands that all shall have the same educational requirements. When it comes to the application of treatment, nothing is offered in objection to any plan of treatment which the licensed practitioner may desire to employ. The law as it exists should be upheld, and the reason it is not upheld is through the laxness of our medical boards, and the apathy of the medical profession in engaging in any sort of legislation which while protecting the public probably would be considered as inaugurated through selfish motives. Probably in time the public will realize the injustice of the whole situation as it pertains to the deification of ignorance, and restrictive legislation will be enforced. In the meantime it is not necessary to attack the charters of chiropractic institutions, for chiropractic schools can, and do, operate without charters.

MAY, 1922

OUR editorial in the April number of THE JOURNAL concerning the imposition of insurance companies in general, and the Lincoln National Life in particular, upon the medical profession, has brought forth a number of interesting communications. One communication, giving a series of letters which passed between an Indiana physician and the above mentioned insurance company following the presentation of a bill for service rendered in filling out one of their regular questionnaires, is of sufficient interest and importance to merit the attention of medical men in general. We are publishing the correspondence herewith:

FIRST LETTER

Fort Wayne, Indiana, April 10, 1922.

DR. ——,

Dear Doctor:

We are in receipt of your statement for \$—— for furnishing this Company with information on ——, a patient of yours, who has applied to us for insurance.

We have always felt (possibly we are in error) that a physician's professional responsibility toward his patient does not end entirely with the mere completion of the treatment he was to have, but we have felt that the duty still remained with the doctor to impart information regarding this treatment when such information would not have a derogatory effect but would perform a distinct service. For instance, in the case of Miss ——, we would not have been justified in issuing a policy without knowing that there was not a more sinister aspect to the condition for which you treated her than was set forth in her statement and without that information we would have been unable to perform what we are pleased to call a distinct service in giving her protection.

The Mayo Clinic, at Rochester, Minn., Dr. G. W. Crile, of Cleveland, Doctors Thayer and Barker of Johns-Hopkins Hospital, and numerous others are continually filling out our blanks because they believe in insurance and know that they are assisting their former patients who are deserving of protection and are also serving a public welfare institution, which life insurance undoubtedly is.

As this information is always furnished us without charge, it has occurred to us that you do not fully understand, or have not considered, the exact significance of this information.

While the facts which you have given us have been an accommodation to the Company, yet by giving them to us you have more directly favored your patients by assisting them in obtaining the insurance which they desired. Physicians have always been glad to cooperate in this manner, and we believe that after regarding the matter from this point of view, you also will be glad to be numbered among those physicians with whom we have had similar dealings.

LINCOLN NATIONAL LIFE INS. CO.

REPLY

S—— B——, Indiana, April 14, 1922.

GENTLEMEN:

I am in receipt of your letter in reply to my statement for service rendered in the case of Miss ——.

As to a physician's professional responsibility toward his patients—the practice of medicine, like selling life insurance, is a matter of business. This applicant has received value in full for such fees as paid for service I have heretofore rendered, a just fee, commensurate with my knowledge of what it costs me to operate my business, has been charged.

Your Company is in business primarily to earn dividends and you base your premium rate on what experience has shown to be adequate to meet losses, pay necessary expenses and earn a return on money invested. Your interest in your applicant ceases after you have paid his, or her, death loss, for you deem such payment consummates your obligation, and also when the applicant chooses to quit paying premiums.

If the service I have rendered you concerning this patient was given for any humanitarian reason it might be granted gratuitously; but it is not, it is to protect your Company's business.

You grant in your communication that the facts in this case as furnished have been an accommodation. I go further and state that they are a distinct business asset and as such are valuable to you or you would not seek such facts and opinions.

Now as to the attitude of various other physicians, it interests me not. Many physicians choose to go out as medical missionaries without hope of reward or compensation.

Your classifying an insurance company as a public welfare institution is a little far-fetched. They are distinctly operated for profit and have no harbor for the deserving poor or destitute.

I, like many other physicians, do a certain amount of business for which I receive no remuneration, some of it we class as charity; but when I render service to those who are able to pay I feel that it is their duty to do so. A statement of fee commensurate with service has been rendered in this particular case.

Very truly yours,

INSURANCE COMPANY'S REPLY

Fort Wayne, Indiana.

DEAR SIR:

In view of your letter of April 14, we are inclosing herewith Company's check for \$—— in payment of your service in connection with the case of ——.

Very truly yours,

LINCOLN NATIONAL LIFE INS. CO.

DEATHS

EDWIN WALKER, M.D., of Evansville, who died April 23, 1922, had been in declining health for the past five years, due to a spinal disease which a laminectomy disclosed to be round-celled carcinoma.

Dr. Walker was born at Evansville, Indiana, in 1853, being sixty-eight years old at the time of his death, and was the son of James T. and Charlotte Walker. He was married to Miss Capitola Hudspeth of Evansville, who survives him. No children were born to Dr. and Mrs. Walker.

His early education was obtained at the Evansville public schools, and later he graduated from Hanover College, from which school he received the degree of Ph.D. He then began the study of medicine, graduating when he was but twenty years of age from the Evansville Medical College in 1874. He also graduated from the New York University Medical College in 1879. Shortly after his graduation in medicine he was made demonstrator of anatomy and

subsequently professor of anatomy in the Evansville Medical College. Later he also held the chair of Diseases of Women, and at one time the chair of Diseases of the Nervous System.

Dr. Walker was a constant student and had made several trips to Europe, on one of which he spent two years in postgraduate work. He was an active worker in medical societies, and has contributed much to the medical literature of his state. He had been first vice-president



Dr. Edwin Walker

ican Medical Association he was a member of the first House of Delegates, and represented the Indiana State Medical Association in that capacity for several years.

Dr. Walker also was interested in civic affairs, and for the past twenty years had been president of the Associated Charities of Evansville. At one time, for four years, he served as a member of the City Council and president of the City Board of Health. He formerly was a member of the board of trustees of the Medical College of Indiana.

Dr. Walker engaged in general practice for several years, afterwards giving his chief attention to surgery, and in 1894, in association with the late Dr. A. M. Owen, he established the Walker Hospital. This hospital has been for many years, and still is, the largest and most successful private hospital in Indiana, and since his illness has been conducted by his staff of nine associates.

As stated editorially by the *Evansville Courier*, if ever a man ennobled a noble art, Dr. Edwin Walker surely graced and adorned his profession. It is given to but few of us to reach the height in his chosen life work that Dr. Walker achieved; it is given to fewer of us to reach the pinnacle and leave only admirers upon the plains beneath—yet that dual achievement may be writ to his everlasting credit. An honored memory is a wonderful heritage, and Dr. Walker's life and work will live on and be an inspiration to those whose privilege it was to know him.

THOMAS A. SHANE, M.D., of Columbus, died April 14 at the age of eighty-two years. Dr. Shane graduated from the Pulte Medical College, Cincinnati, in 1881.

JOHN S. HOLLINGSWORTH, M.D., of Indianapolis, died April 8 at the St. Francis Hospital as the result of an automobile accident. Dr. Hollingsworth was fifty-seven years of age. He graduated from the Medical College of Indiana, Indianapolis, in 1893.

GEORGE A. STEVENSON, M.D., of Rising Sun, died March 30 at the age of eighty-four years. Dr. Stevenson graduated from the Rush Medical College, Chicago, in 1865, and was a member of the Ohio County Medical Society, the Indiana State Medical Association and the American Medical Association.

ELIHU P. WASHBURN, M.D., died at his home in Buffalo, Indiana, April 1. Dr. Washburn was eighty years of age and was a graduate of the Medical College of Indiana, Indianapolis. He was a member of the Jay County Medical

of the American Medical Association, president of the Mississippi Valley Medical Association, president of the Indiana State Medical Association (at the time of his election being the youngest physician who had ever held the latter office), and was a member of the first Board of Councilors under the present organization of the society, which position he held for a number of years. He was interested and active in all that pertained to the interests of the medical profession. He was, until the beginning of his present illness, one of the leading abdominal surgeons in Indiana, and his experience and skill were reflected in his papers and discussions in the numerous medical associations to which he belonged. He had an unusual charm of manner and felicity of expression, and was especially well known in the American Medical and Indiana State Medical Associations, in both of which he had an active and sincere interest. Upon the reorganization of the Amer-

Society, the Indiana State Medical Association and the American Medical Association.

MILLARD F. BRACKNEY, M.D., of Mooresville, died April 20 as the result of complications of diseases contracted while in the army. Dr. Brackney graduated from the Medical College of Indiana, Indianapolis, in 1890, and was a member of the Morgan County Medical Society, the Indiana State Medical Association and the American Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

THE Benton County Medical Society held its regular monthly meeting at Oxford, March 29.

DR. O. T. BRAZELTON, of Princeton, has been appointed county health officer for Gibson county.

THE Northern Tri-State Medical Association held its forty-ninth annual meeting at Ann Arbor, Michigan, April 11.

THE Howard County Medical Society held its meeting at Kokomo, April 7. A paper was presented by Dr. George D. Marshall.

DR. L. D. GOODWIN has moved to Francisco from Winslow. He will take up the practice of medicine in Francisco.

THE Sullivan County Medical Society held a meeting at Sullivan, April 12. A paper was presented by Dr. V. A. Funk, of Vincennes.

AN electric diet kitchen is being installed in the Indianapolis Orphan Asylum, the gift of Mrs. Bernard Vonnegut.

DR. CHARLES S. WOODS has resigned as superintendent of the Methodist Hospital, Indianapolis.

DR. E. E. HODGIN, president of the Board of Public Health of Indianapolis, has announced that seven internes will be added to the present number (seventeen) at the City Hospital.

DR. W. A. HOLLIS, of Hartford City, has returned from Chicago, where he took some special work on the eye under Professor Fuchs, of Vienna.

DR. BYRON E. BIGGS has been appointed superintendent of the Indiana State School for Feeble-Minded Youth at Fort Wayne by Governor McCray.

DR. F. E. HAGIE, of Richmond, has been appointed surgeon for the Pennsylvania Railroad Company to succeed the late Dr. Charles Marvel.

THE Clinton County Medical Society held its regular meeting at Frankfort, April 6. Dr. L. L. Harding, of Frankfort, presented a paper on "Hyper-Thyroidism".

DR. HERBERT A. RAY, of Fort Wayne, has been selected by the S. F. Bowser Company to fill the place of company physician. He succeeds the late Dr. E. E. Morgan.

DR. W. C. REED, of Bloomington, has been made assistant to Dr. J. E. P. Holland, Indiana University physician. Dr. Reed succeeds Dr. Fernande Hachat Luck.

THE Tippecanoe County Medical Society held its monthly meeting at Lafayette, March 28. A paper on "Some Aspects of Malocclusion" was presented by Dr. Paul A. Risk.

At the request of a delegation of colored men from Marion County, adequate provision has been made in the county tuberculosis hospital at Sunnyside for the care of negro patients.

AN amputating case, purchased in 1840 and used during the Civil War by the late Dr. Albert G. Preston, has been placed in the state museum at Indianapolis.

THE Huntington County Medical Society held its regular meeting April 4 at Huntington. A paper on "Uremic Poisoning" was read by Dr. R. G. Johnson.

COMMENCEMENT exercises for eighteen nurses of the Lutheran Hospital Training School for Nurses, Fort Wayne, were held May 3.

THE St. Joseph and Epworth Hospitals at South Bend are to be enlarged. The St. Joseph Hospital will erect a new addition that will cost \$250,000 and the Epworth will expend \$150,000 upon improvements and additions.

AFTER an enforced vacation of more than four months, Dr. G. M. LaSalle has resumed the practice of surgery at Wabash. As the result of an infection Dr. LaSalle was ill for many weeks.

THE Muncie Academy of Medicine held its regular meeting at the Hotel Roberts, Muncie, April 7. Dr. William T. Coughlin presented a paper on "Diagnosis of Surgical Conditions About the Head and Neck".

THE Madison County Medical Society held its regular meeting at the Grand Hotel, Anderson, April 18. A paper was presented by Dr. H. W. Gante, the subject of which was "The Allen Treatment for Diabetes".

DR. WILL SHIMER, of Indianapolis, has resigned as bacteriologist and pathologist for the State Board of Health to become bacteriologist and pathologist for St. Vincent's Hospital and head of its laboratories.

DR. CHESTER N. FRAZIER of the Irene Byron Hospital of Fort Wayne has received an appointment to the Rockefeller Institute, Peking, China. Dr. Frazier is a specialist in skin diseases.

THE Muncie Academy of Medicine held its meeting Friday evening, April 28, at the Hotel Roberts, Muncie. Dr. C. P. Emerson, Indianapolis, presented a paper on "Neuroses of the Twentieth Century".

DR. CHARLES S. WOODS, of Indianapolis, was made president of the Indiana section of the American Hospital Association to succeed Dr. George F. Keiper, of Lafayette, at the annual convention of the Association held April 19.

THE regular monthly meeting of the Kosciusko County Medical Society was held March 28 at Warsaw. "Urinary Stones" was the subject of an address presented by Dr. H. O. Mertz, of Indianapolis.

THE Porter County Medical Society held its meeting at Valparaiso, March 30, at the home of Dr. H. O. Seipel. Dr. Harry E. Mock, of Chicago, presented a paper on "Reconstructive Surgery as Learned from the World War".

DR. R. A. BARLOW, recently associated with the Mayo Clinic, has announced the opening of his office at 461 Farmers' Trust Building, South Bend, for the special practice of diseases of the ear, nose and throat.

THE United States Civil Service Commission announces an open competitive examination for dietitian. Applications will be rated as received until further notice. Applicants should apply at once for Form 1312, to the Civil Service Commission, Washington, D. C.

THE Muncie Academy of Medicine held a meeting at the Hotel Roberts, April 21. "Natural History of Bladder Infections" was the subject of an address presented by Dr. Hugh Cabot of the Michigan University School of Medicine.

THE joint meeting of the Jackson and Bartholomew County Medical Societies was held at Seymour, April 6. A paper on "The History of Endocrinology" was presented by Dr. L. B. Hill, of Seymour, and Dr. Gillespie, also of Seymour, presented a paper on "Obstetrical Problems".

THE Hendricks County Medical Society held its regular quarterly meeting at Danville, April 28. Dr. L. D. Carter, of Indianapolis, talked on the diseases of children and babies, and the care of the baby during summer months. A baby clinic was held in connection with the meeting.

AT the sixth annual meeting of the American College of Physicians, held in Minneapolis, the following officers were elected for the ensuing year: President, Dr. James M. Anders, Philadelphia; vice-presidents, Drs. Frederick Tice, Chicago, and Charles C. Bass, New Orleans; treasurer, Dr. Clement R. Jones, Pittsburgh, and secretary, Dr. Frank Smithies, Chicago.

THE United States Civil Service Commission announces an open competitive examination for Associate in Clinical Psychiatry and Psychotherapy. Applications will be rated as received until July 31, 1922. Applicants should at once apply for Form 2118, stating the title of the examination desired, to the Civil Service Commission, Washington, D. C.

COL. EDWARD GIBBS, who recently returned from Poland, where he went to study typhus conditions, states that strict precautions are necessary to prevent the scourge from spreading in this country. Dr. Gibbs reports that there were only three thousand physicians to cover the entire thirty million population of Poland, and that typhus is epidemic.

THE United States Civil Service Commission announces open competitive examinations for Laboratorian (bacteriology) and Assistant Laboratorian (bacteriology). Applications will be rated as received until further notice. Applicants should at once apply for Form 1312, stating the title of the examination desired, to the Civil Service Commission, Washington, D. C.

IT has been announced that a course in diagnosis and treatment of syphilis of the nervous system will be given by Drs. H. C. Solomon and Henry Viets from June 5th to 30th, inclusive, at the Boston Psychopathic Hospital, the Massachusetts General Hospital and the Neuro-pathological Laboratory, Harvard Medical School. Enrollment is through the Graduate Office at the Harvard Medical School.

THE United States Civil Service Commission announces open competitive examinations for the position of Assistant Medical Officer (psychiatry) and Junior Medical Officer (psychiatry). Applications will be rated as received until further notice. Applicants should at once apply for Form 1312, stating the title of the examination desired, to the Civil Service Commission, Washington, D. C.

At the annual meeting of the American Congress on Internal Medicine, held at Rochester, Minnesota, the following officers were elected: President, Dr. Sydney R. Miller, Johns-Hopkins University Medical School, Baltimore; vice-presidents, Drs. Henry S. Plummer, Rochester, Minn., and S. R. Roberts, Atlanta, Ga.; treasurer, Dr. C. R. Jones, Pittsburgh, and secretary general, Dr. Frank Smithies, Chicago.

THE United States Civil Service Commission announces that there is need for nurses in the hospitals of the United States Veterans' Bureau and the Public Health Service and at Indian schools and agencies. Applications will be received for these positions until further notice. Full information concerning entrance requirements, salaries, etc., and application blanks, may be obtained by communicating with the United States Civil Service Commission, Washington, D. C., or the secretary of the civil service board at the post office or customs house in any city.

THE Marion National Sanatorium, formerly the Soldiers' Home, National Military Home, Indiana, is being converted into a sanatorium for disabled veterans of the World War suffering from mental or nervous diseases. More than 800 patients are receiving treatment now and there will be room for 150 additional ex-service men when the present changes are completed. A system of schools for the teaching of occupational therapy is provided and the pre-vocational training is conducted in the wards. Ground has recently been broken for a new eighty-bed tuberculosis hospital which will be opened September 1.

DURING March the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: Abbott Laboratories—Izal; Izal Disinfectant Powder. Intra Products Co.—Ven Sterile Solution Mercury Benzoate 1 Cc. Merrill-Soule Co.—Powdered Protein Milk-Merrill-Soule. Parke, Davis & Co.—Pertussis Vaccine; Pneumococcus Vaccine (4 Types); Streptococcus Vaccine Polyvalent (Scarlatina); Typhoid - Paratyphoid Vaccine (Prophylactic). Seydel Manufacturing Co.—Benzocaine-Seydel. Winthrop Chemical Co.—Iothion; Iothion Oil;

Sabromin; Sabromin Tablets 8 Grains. Acri-Flavine-Heyl; Proflavine-Heyl. These products are now marketed by the National Aniline & Chemical Co. and the Council has continued the acceptance for New and Nonofficial Remedies under the new firm name.

SOCIETY PROCEEDINGS

COUNCILORS' MEMBERSHIP CONTEST

District—Councilor	No. of Counties	1921 Memberships	1922 Memberships to Date	Percentage
First—Dr. Willis.....	7	176	171	.97
Second—Dr. Schmadel.....	7	149	137	.92
Third—Dr. Leach.....	9	130	114	.87
Fourth—Dr. Osterman.....	10	128	133	.96
Fifth—Dr. Weinstein.....	5	158	154	.97
Sixth—Dr. Spitzman.....	8	150	158	1.05
Seventh—Dr. Earp.....	4	425	429	1.01
Eighth—Dr. Conrad.....	5	172	157	.91
Ninth—Dr. Moffitt.....	10	253	244	.96
Tenth—Dr. Shanklin.....	5	151	131	.86
Eleventh—Dr. Black.....	6	191	190	.99
Twelfth—Dr. Morgan.....	8	241	236	.98
Thirteenth—Dr. Berteling..	8	274	257	.92
	92	2608	2507	

JACKSON, BARTHOLOMEW, JENNINGS

A meeting of the physicians of Jackson, Bartholomew and Jennings counties was held at Seymour on April 6, with 22 physicians present. These union meetings have been held monthly during the past winter, alternating Seymour and Columbus as meeting places.

A banquet was held at six o'clock at the Hotel Fosgate, after which the following scientific program was given: "The History of Endocrinology", by Dr. C. E. Gillespie, Seymour; "Missed Abortion", Dr. L. B. Hill, Seymour.

The next meeting is to be held at Columbus in May. Adjourned.

L. B. HILL,
Secretary Jackson County
Medical Society.

ELEVENTH DISTRICT

At the October (1921) meeting of the Eleventh Indiana Councilor District Medical Association, Dr. G. R. Daniels, of Marion, offered the following resolution which is to be voted upon at the coming meeting to be held May 18, 1922:

"To amend the Constitution and By-Laws of Art. 3, Sec. 2, by adding: and any member who may not attend the meetings of any year may withhold paying the dues for such year without forfeiting his membership."

Art. 3, Sec. 2, that the above resolution proposes to amend now reads as follows:

Sec. 2. (Amended October 16, 1919, to read:) The membership of this association shall consist of members in good standing of the county societies composing this district, who have paid annual dues into this association on or before the opening of the annual meeting on the third Thursday in May of any current year of its existence."

INDIANAPOLIS MEDICAL SOCIETY

Meeting April 25, 1922

Meeting called to order by the president. Minutes of previous meeting read and approved. Announcement made by the secretary that there would be a dinner meeting of the society on the 9th of May, at which time Dr. Clifford G. Grulee and Dr. Edwin C. Ryerson, both of Chicago, would be the principal speakers. No new business. Unfinished business consisted of the report of Committee on State Medicine, which follows:

Your Committee, firmly believing that the principle of our Government, as enunciated by the Constitution of the United States, "equal opportunity to all and special privileges to none," applies to the relations between the State and the Medical Profession, as well as between the State and other industries; that a free and untrammeled Medical Profession is necessary for the advancement of Medical Science, for the welfare of the Medical Profession and for the health of the people; that the Medical Profession as a whole, and not one physician or group of physicians, is responsible for public, as well as private health; that it devolves upon the Medical Profession directly and indirectly to educate the people to sound thinking on all matters pertaining to health and to guard them against socialistic schemes of selfish individuals and groups, after having considered every phase of so-called State Medicine, have agreed that:

WHEREAS, Your Committee recognizes the right of the State to supervise medical education, to conserve the health and well-being of its citizens, and to that end has the privilege and duty of erecting and maintaining institutions for medical education, for the care and treatment of its indigent population, and has the right and duty of fixing the standard for the proper performance of the Medical Practice Act, and,

WHEREAS, The State has the right and duty to conduct and maintain adequate State and County Health Boards, and insofar as it fulfills all these above indicated rights and duties, should have and does have the unqualified support of the Medical Profession in the fulfillment of these vested rights, which in no sense conflict with the principles hereinafter set forth, and,

WHEREAS, Certain abuses of the above rights and duties, which abuses, if unchecked, will develop into State Medicine, a term which to most physicians and people has meant everything and meant nothing, and which may be defined as the sum of a number of growing evil tendencies not commonly interpreted as having any part in Medical Socialism, and,

WHEREAS, The indicated abuses have been, and are still indulged in, and abetted by the State or its agents, we, therefore, offer the following resolutions as a platform of principles upon which the Indianapolis Medical Society should stand:

RESOLVED:

1. That while the Indianapolis Medical Society heartily supports the proposition that the State should care for its mental and moral defectives, and its indigent sick, it unqualifiedly condemns the tendency of the State to enter into competition with licensed physicians in the practice of Medicine and Surgery, and it condemns the maintenance of pay beds and wards in State Institutions or those partially subsidized by the State.

2. That it condemns the practice of appointing physicians to salaried and advertised positions and at the same time permitting these same salaried officials, free competitive rights against the profession to which they belong, and declares that no person employed in any of its Medical Institutions, Hospitals, or Colleges, either in whole or in part supported by State funds, who occupies a position of trust or a chair of teaching in any department of Medicine or Surgery and who receives pay or salary for such employment, should be accorded the privilege of private medical or surgical practice, so long as such person is employed by the State and receives pay for services from any State funds of whatsoever character.

3. That it commends the establishment of free clinics for the treatment of tuberculosis, mental hygiene, venereal, and other diseases of the indigent sick, but for no other than the indigent.

4. That it endorses in public health administration, full time salaried officers who shall not, during their service, have the privilege of private practice, nor any right of supervising private practice.

5. That it upholds the standard and purpose of the State Medical Practice Act and insists that all persons engaged professionally in the treatment of diseases, or the sick, whatsoever, of any description, shall be wholly subject to the same standard of educational qualifications and State examinations.

6. That while, at the present time, it recognizes the necessity of certain societies and industrial development to maintain adequate medical and surgical staffs, it deplores the growing tendency to widen the scope of contract and similar medical and surgical practice wherein the profession is not remunerated according to the usual competitive method and the patient not permitted to use his own selection of physicians.

7. That it condemns legislative enactments relative to all health matters, without the sanction and approval of the licensed and registered Medical Profession.

8. That it opposes lay and political domination of Medical and Surgical practice as opposed to sound public policy and to the scientific progress of medicine.

9. That, while it endorses the efforts of the agents of the Federal and State Governments in their desire to promote the health of the people, it condemns Federal supervision of State medical activities, masquerading under the guise of Federal aid or subsidy.

10. That it condemns the socialistic efforts of State, Federal, County or Municipal agents, to force the expense of private health upon the taxpayers, under the guise of Public Health.

11. That it condemns all "propaganda and elements at work" to create fictitious health problems, as attempts to socialize the Medical Profession, under the plea of "suffering humanity", whereby a great part of an independent people would be segregated into a pauperized class.

12. That it condemns the exploitation of special fields of medicine, surgery and obstetrics, by technicians, who are not qualified, licensed physicians.

Recognizing that the successful treatment of sick people depends upon personal and confidential relations between physician and patient, which relations are impossible under any of the indicated evils; and knowing humanity in its strength and in its weakness, in health and in disease, in wealth and in poverty, we, who dedicate our lives to the scientific investigation, prevention, and treatment of disease, with firm conviction in the ultimate wisdom of our course, offer these resolutions, and pledge our best efforts to uphold all true American ideals and principles.

BE IT FURTHER RESOLVED, That a true copy of these resolutions be immediately sent to the Secretary of each County Medical Society of the State of Indiana, to the Editor of the JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION, and to the Editor of the Journal of the American Medical Association.

FREDERICK E. JACKSON, M.D., Chairman,
JOSEPH RILUS EASTMAN, M.D.,
W. B. KITCHEN, M.D.,
THOMAS B. NOBLE, M.D.,
ALBERT E. STERNE, M.D.,

Committee on State Medicine,
Indianapolis Medical Society.

Each paragraph of the above resolutions was fully discussed by the Society, a motion made and carried to adopt each separate paragraph, after which a motion was made and carried to adopt the resolutions in their entirety.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

AMMONIUM ICHTHYOLATE-MEADOWS.—An aqueous solution, the important constituents of which are ammonium salts of indefinite, complex, organic acids, partaking of the nature of oxygenated bodies and sulphonates held in colloidal dispersion. It is derived from an oily distillate of a fossiliferous bitumen found in Texas. It is claimed that ammonium ichthyolate-Meadows has the therapeutic properties of ichthyol. (See New and Nonofficial Remedies, 1921, p. 344.) It is a reddish-brown, viscous fluid, having a faint odor. It is soluble in water and miscible with glycerine and fatty vehicles. Meadows Oil and Chemical Corporation, Durant, N. Y.—(*Jour. A. M. A.*, April 1, 1922, p. 967).

QUINIDINE.—**QUINIDINA.**—An alkaloid obtained from the bark of various species of Cinchona. Quinidine acts upon the heart in such a manner as to bring about cessation of fibrillation of the auricles in a certain proportion of instances. It is used to restore the normal rhythm of the heart in cases of auricular fibrillation. The drug is not without unpleasant and even dangerous effects. Cases of sudden death from its use have been reported. Quinidine is generally administered as quinidine sulphate. Two-tenths gm. given as a preliminary dose. If no untoward effects result, the drug is administered on the following day in doses of from 0.2 to 0.4 gm., from three to five times a day and continued for from one to three days.

QUINIDINE-P. W. R.—A brand of quinidine-N. N. R. Powers-Weightman-Rosengarten Co., Philadelphia.

QUINIDINE-N. Y. Q.—A brand of quinidine-N. N. R. New York Quinine and Chemical Works, New York.

QUINIDINE-M. C. W.—A brand of quinidine-N. N. R. Mallinckrodt Chemical Works, St. Louis.

QUINIDINE SULPHATE.—**QUINIDINAE SULPHAS.**—The sulphate of quinidine. For actions, uses and dosage, see under quinidine. It may be administered in the form of cachets, capsules, pills or tablets.

QUINIDINE SULPHATE-P. W. R.—A brand of quinidine sulphate-N. N. R. Powers-Weightman-Rosengarten Co., Philadelphia.

QUINIDINE SULPHATE-N. Y. Q.—A brand of quinidine-N. N. R. New York Quinine and Chemical Works, New York.

QUINIDINE SULPHATE-M. C. W.—A brand of quinidine sulphate-N. N. R. Mallinckrodt Chemical Works, St. Louis. (*Jour. A. M. A.*, April 8, 1922, p. 1051).

BENZOCAINE-SEYDEL.—A brand of benzocaine-N. N. R. (See New and Nonofficial Remedies, 1922, p. 39). The Seydel Manufacturing Co., Jersey City, N. J.

VEN STERILE SOLUTION PROCAINE 1 Cc.—Each ampule contains 1 Cc. of a 1 percent solution of procaine-N. N. R. (See New and Nonofficial Remedies, 1922, p. 35.) Intra Products Co., Denver, Colo.—(*Jour. A. M. A.*, April 22, 1922, p. 1201).

VEN STERILE SOLUTION MERCURY BENZOATE 1 Cc.—Each Cc. contains mercuric benzoate, 0.02 Gm. (1½ grain). (See New and Nonofficial Remedies, 1922, p. 192.) Intra Products Co., Denver, Colo.

TABLETS OF MERCUCOCHIROME-220 SOLUBLE.—Each contains 4.6 grains. (See New and Nonofficial Remedies, 1922, p. 187).—(*Jour. A. M. A.*, April 29, 1922, p. 1296).

STERILE SUSPENSION MERCURY SALICYLATE IN CACAO BUTTER 1 Cc.—Each Cc. contains .097 Gm. (1½ grains) of mercuric salicylate. (See New and Nonofficial Remedies, 1922, p. 193.) Intra Products Co., Denver, Colo.

STERILE SUSPENSION MERCURY SALICYLATE IN OLIVE OIL 1 Cc.—Each Cc. contains 0.097 Gm. (1½ grains) of mercuric salicylate. (See New and Nonofficial Remedies, 1922, p. 193). Intra Products Co., Denver, Colo.—(*Jour. A. M. A.*, April 29, 1922, p. 1296).

PROPAGANDA FOR REFORM

"PREMEDICATED" ALCOHOL.—A petition to permit the use of so-called "premedicated" alcohol in remedies for internal use has recently been placed before the Secretary of the Treasury and the prohibition officials. According to drug journals, such a petition was presented by the Counsel for the Proprietary Association—the organization of the "patent medicine" interests—and also by the Chattanooga Medicine Company—the makers of "Wine of Cardui". When thus medicated, the alcohol is to be tax free. This proposition contains dangers to medicine and to pharmacy in that it may render scientific control of such medicaments difficult.—(*Jour. A. M. A.*, April 1, 1922, p. 970).

NEPHRITIN, PEPTENZYME, TROPHONINE AND PANCRLOBILIN.—Sometimes the results of the application of the esthetic arts to commercial interests is incongruous. A house organ uses the names of famous writers, presumably to attract attention. Thus: It is suggested that if the physicians to Montaigne, who died of nephritis, had known of "Nephritin" they would have been able to furnish him with "substantial constructive help"—a statement which may be more readily accepted by litterateurs than by pathologists. Since all of us cannot live the simple life recommended by Joaquin Miller, as a means of avoiding indigestion, it is inferred that we must depend on Peptenzyme. It is related that Thomas Hood passed away in spite of soups and other nourishing food prepared for him by his wife. "Therefore," says the advertiser, "use Trophonine and live." "Like Victor Hugo," proclaims the advertiser, "millions today are eating the unknown and are paying the toll in constipation." He further asserts, "From whatever cause it originates—Pancrobilin is always indicated". Alas. Nephritin, Peptenzyme, Trophonine and Pancrobilin cannot avail Montaigne, Miller, Hood or Hugo now.—(*Jour. A. M. A.*, April 1, 1922, p. 971).

LEAVEN'S ASTHMA PRESCRIPTION.—This is put on the market by the Leavengood Drug Co., Rosedale, Kansas. The A. M. A. Chemical Laboratory reports that the composition of this preparation is essentially: Potassium iodide, 10.9 Gm., sugar (sucrose), 55.0 Gm., iron, a trace, water, flavoring and coloring matter to make 100 Cc.—(*Jour. A. M. A.*, April 1, 1922, p. 991).

EKSIP.—This is a mail-order "cure" for diabetes, marketed by Matthew Richartz with the slogan, "No more dieting! No more starving! Eat and get well!". Eksip is sold in the form of tablets at \$6.00 for 200. The A. M. A. Chemical Laboratory reports that the bulk of the tablets consisted of magnesium carbonate and starch. A small quantity of an unidentified drug was found. Alkaloid, heavy metals and emodin-bearing drugs were absent.—(*Jour. A. M. A.*, April 1, 1922, p. 991).

"PROPRIETARY PREPARATIONS IN POLAND".—The influence of the work of the American Medical Association—through its Council on Pharmacy and Chemistry and *The Journal's* Propaganda for Reform in Proprietary Medicines—in protecting the public, both directly and indirectly, against the nostrum evil, extends year by year. Especially is it noticeable when new legislation is created. Recently, the new Polish state introduced regulations governing the

(Continued on Adv. p. xx.)

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(Continued from p. 184.)

manufacture and sale of proprietary remedies. These regulations reflect the change in attitude that has taken place in the public mind in all civilized communities toward the responsibility of those who would make and sell preparations of the home remedy type. The Polish regulations have much in common with recent Austrian and Spanish legislation on proprietary medicines, and the influence of the English Proprietary Medicines Bill is apparent in the prohibition of the use of testimonials. While no quantitative disclosure on the label of the composition of the preparation is required, except in the case of potent drugs, the fullest details are demanded from the manufacturer, this information to be of such a nature as will enable the State Pharmaceutical Institute to prepare the preparation for the purpose of verifying the manufacturer's statements. The obligation of the manufacturer to keep a record not only of his production, but of all his supplies to wholesalers, is also a new feature.—(*Jour. A. M. A.*, April 8, 1922, p. 1071).

YEAST FOAM TABLETS.—Shorn of verbiage, "Yeast Foam Tablets" are claimed to be dried yeast in the form of tablets. They are put up in typical "patent medicine" style. The advertising for these tablets would lead the public to believe that it is in imminent danger of suffering from an inadequate supply of vitamin B. Though the Yeast Foam propaganda is plainly addressed to the public, specimen packages have been sent to physicians. Thus, the profession is given once more the opportunity to act as an unpaid peddler.—(*Jour. A. M. A.*, April 8, 1922, p. 1074).

HORMOTONE.—This is a "pluriglandular tonic for asthenic conditions", sold by the G. W. Carnrick Co. in the form of tablets for oral administration. Each tablet is said to contain 1/10 grain of desiccated thyroid, 1/10 grain of entire pituitary, together with the hormones of the ovary and testes—the amount and the form in which the latter are supposed to be present are not given. The Council on Pharmacy and Chemistry refused to accept Hormotone for New and Nonofficial Remedies.—(*Jour. A. M. A.*, April 8, 1922, p. 1074).

QUEEN OF ANTISEPTICS.—This preparation is marketed by a person in Aurora, Illinois, calling herself "Mme. Leouard". It is claimed to be "A Perfect Vaginal Germ Destroying Powder and Applicator". The A. M. A. Chemical Laboratory reports that the preparation is composed essentially of boric acid, 97 percent, and ammoniated mercury 3 percent.—(*Jour. A. M. A.*, April 8, 1922, p. 1072).

YEAST PREPARATIONS AND VITAMIN-B CONCENTRATES.—The Council on Pharmacy and Chemistry has adopted the following principles as a guide in the consideration of yeast preparations and vitamin B concentrates for New and Nonofficial Remedies: 1. The claim that deficiency of vitamin B and diseases resulting therefrom are common conditions in the United States is not at this time warranted. 2. The claim that yeast preparations or extracts are, in principle or in general, essentially more effective or more practical or a more available means of administering vitamins than the commonly available vitamin containing foods is not at this time supported by adequate acceptable evidence. 3. The claim that therapy with yeast or yeast preparations has as yet more than an experimental status is not at this time supported by adequate acceptable evidence.—(*Jour. A. M. A.*, April 15, 1922, p. 1146).

THE THERAPEUTIC USE OF YEAST AND VITAMIN PREPARATIONS.—Newspapers and magazines contain gratuitous reminders that we are confronted with menaces to health which not only ought to be averted, but which can readily be remedied, when present, by the simple expedient of a potent proprietary vitamin preparation. If some of the claims of the advo-

cates of a widespread yeast or vitamin therapy regarding the danger of vitamin starvation were warranted, one might still question whether the special "concentrated" or vitamin-rich medicaments were required to remedy the situation. An extensive inquiry has led the Council on Pharmacy and Chemistry to the deduction that disease states attributable to lack of vitamin B are not widespread in this country at the present time. Even an enthusiast will be forced to agree with the Council that yeast or yeast vitamin therapy has as yet nothing more than an experimental status.—(*Jour. A. M. A.*, April 15, 1922, p. 1127).

KOLOR-BAK.—This is a hair dye marketed by the Hygienic Laboratories, Chicago. It is claimed not to be a dye or stain but to restore gray hair to its original color. It is claimed to be harmless and not to contain powerful mineral ingredients. The preparation was analyzed in the A. M. A. Chemical Laboratory and was found to contain lead acetate, 0.6 Gm., and precipitated sulphur, 1.0 Gm., in 100 Cc. It is evident from the analysis that the claims made for Kolor-Bak are false.—(*Jour. A. M. A.*, April 15, 1922, p. 1146).

MORE MISBRANDED nostrums.—The following proprietary preparations have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act:

DIEMER'S MANHOOD TABLETS (Dr. F. W. Diemer Medicine Co.), consisting chiefly of sodium bicarbonate, reduced iron, a compound of zinc, phosphorus, and small amounts of capsicum, strychnin and an extract from a laxative plant drug.

SANTAL-MILLER (General Drug Co.), consisting essentially of San-tal oil and claimed to relieve or cure gonorrhea.

LONG'S KIDNEY AND BLADDER REMEDY (Wm. T. Long Medicine Co.), capsules containing phosphorus, extractives of damiana and nux vomica.

BANES' FEMALE PILLS (Dr. A. V. Banes Medicine Co.), consisting essentially of compounds of calcium, magnesium and iron, and mercury, capsicum, sugar and aloes.—(*Jour. A. M. A.*, April 15, 1922, p. 1146).

SA-TAN-IC (Sa-Tan-Ic Medicine & Mfg. Co.), containing magnesium sulphate, cascara bark extractives, salicylic acid, methyl salicylate, oil of peppermint, water and a trace of alcohol, claimed to be a blood purifier, system renovator and a remedy for stomach, kidney and liver complaints.

BANES' KIDNEY AND RHEUMATIC REMEDY (Dr. A. V. Banes Medicine Co.), containing sodium and potassium compounds of iodine, acetic acid, nitric acid and salicylic acid, vegetable extractive matter, sugar, alcohol and water.

SILVERSTONE'S SEXUAL PILLS (S. Pfeiffer Mfg. Co.), consisting essentially of plant extractives, including resins, nux vomica, alkaloids and damiana.

NUX-AURO-PAPANAD, pills containing strychnin, salts of zinc, calcium and lithium and creosote, claimed to be indicated in Vaso-Motor Paresis, Neuralgias, Melancholia, Malnutrition, General Debility and Sexual Exhaustion.

PAULETTE'S BRAND TANSY TABLETS (Fay & Youngs Rubber Corp.), claimed to be the most reliable tablets known for the suppression of the menstrual function.

EELLS' VITALIZING BLOOD PURIFIER (F. Eells & Sons Co.), a water-alcohol solution consisting essentially of sugar, Epsom salt, laxative plant material and traces of oil of wintergreen and oil of sassafras.

LE SIEUR'S SYRUP OF TAR AND COD LIVER EXTRACT (Ocean Mills Co.), containing chloroform, menthol, oil of tar, ammonium salts, sugar, water, and a small quantity of alcohol.—(*Jour. A. M. A.*, April 22, 1922, p. 1218).



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When I was a boy I used to clerk in my father's country store. One day one of the natives, Lucas Koban by name, came in and standing before a showcase, pointed to its top, saying "Give me a box of that salve." I replied, "I don't see any salve there." "Why," he said, "here is some right here" (touching a carton of a well advertised brand of shoe polish). "Oh," I said, "that is shoe polish." "Huh!" said Lucas, "that's funny; it stands on there 'Rain Proof'." "No," I responded, "that's 'Rain Proof'." "Huh! that's funny," again said Lucas. "Rain proof, is it? Well, I don't care. Give me a box of it anyway. It cured my leg."—Journal of the A. M. A.

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THE JOURNAL OF THE Indiana State Medical Association

*Owned, Published and Controlled by the Indiana State Medical Association
ISSUED MONTHLY under the Direction of the Council*

Volume XV
Number 6

FORT WAYNE, IND., JUNE 15, 1922

Per Year, \$3.00
Single Copy, 30 Cents

CONTENTS

ORIGINAL ARTICLES

	Page.
Ostitis Fibrosa Cystica. A Pathological Consideration. Virgil H. Moon, Indianapolis.....	185
Puerperal Eclampsia. Jane Ketcham, Indianapolis	187
Operative Injury of the Hepatic and Common Bile Ducts. Methods of Avoidance and Repair. H. K. Bonn, Indianapolis.....	192
Ludwig's Angina. William F. Molt, Indianapolis	196
Physical Inequality of School Children. G. W. Spohn, Elkhart.....	200

EDITORIALS

	Page.
Use and Abuse of Vitamines.....	205
X-Ray and Clinical Findings in Normal Chest.....	205
The St. Louis Session of the American Medical Association	206
Division of Fees.....	207
Editorial Notes	208

(Continued on Advertising Page VIII)

Next Annual Session, Muncie, September 27, 28, 29, 1922. List of Officers and Committees on Adv. Page 2.
Entered as Second Class Matter, January 20, 1908, at the Postoffice at Fort Wayne, Indiana, under Act of
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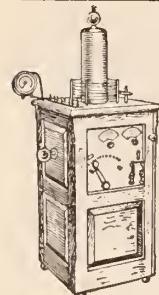
For two years (term expires December 31, 1923): Albert E. Bulson, Jr., Fort Wayne; George F. Keiper, Lafayette Alternates, E. H. Griswold, Peru; Harry Elliott, Brazil.

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ISSUED MONTHLY under Direction of the Council

ALBERT E. BULSON, Jr., B.S., M.D., Editor and Manager

OFFICE OF PUBLICATION: 406 West Berry Street, FORT WAYNE, INDIANA

VOLUME XV

JUNE 15, 1922

NUMBER 6

ORIGINAL ARTICLES

OSTITIS FIBROSA CYSTICA* A PATHOLOGICAL CONSIDERATION VIRGIL H. MOON, M.D. INDIANAPOLIS, INDIANA

Ostitis fibrosa cystica, often spoken of as ostitis fibrosa, is a more common disease than is generally supposed, as is evidenced by the fact that three cases have come under our observation in less than a year's time. The essential features of this condition were probably first accurately described by von Recklinghausen in 1891, hence the disease is sometimes known under the name of von Recklinghausen's bone disease. The salient characteristics of the disease consist in a proliferation of fibrous tissue in the medullary cavities of the long bones, accompanied by absorption of bony substance resulting in rarefaction, moderate enlargement, and weakening of the bone. Usually but not regularly cyst formation is a prominent feature. It is a disease of childhood and youth, the great majority of cases occurring before the age of twenty. It is suggested as probable that those cases occurring after full maturity developed during youth and remained unrecognized until some years later. The disease is insidious in onset, usually painless, and produces few early symptoms. It most frequently happens that attention is first called to the condition by the occurrence of a spontaneous fracture, or by one resulting from unusually slight injury.

Bloodgood gives the frequency of occurrence in different bones in the following order: humerus, femur, tibia. Muller, in reviewing all the cases of which he had record, found the frequency of occurrence in the order: femur, tibia, humerus. Of the three cases here reported, two were in the femur and one in the tibia. The metacarpal and phalangeal bones are occasionally involved, but the occurrence in other bones is rare.

Microscopically the marrow substance is displaced by a uniform growth of fibrous tissue of a peculiar type. This occupies the entire

marrow space, extends into the canals and lacunae of the compact bone and separates the lamellae of the hard, bony shell. There is absorption of calcareous material, leaving only a very thin outer shell of the shaft. The periosteum is intact and apparently unaffected. Giant cells are not numerous but are occasionally seen. These are of the type of osteoclasts or of foreign body giant cells rather than resembling those of giant-celled sarcoma. Occasionally small islands of cartilage cells are found embedded in the fibrous tissue or in cysts near the epiphyses.

Cyst formation is a frequent and much discussed feature of the condition, but is not present in all cases. The fluid of the cysts is not under marked pressure and is thin and of a yellowish, reddish or dark brown color. It contains varying amounts of blood cells and pigment, but according to Bloodgood is not distinctly hemorrhagic. The cysts may be single or multiple and may or may not have a distinct limiting membrane. In an analysis of 69 collected cases, all having the character of ostitis fibrosa as shown by the characteristic proliferation of fibrous tissue and by the accompanying rarefaction, Bloodgood found the following variations in regard to cyst formation: (1) A single cyst with bony shell but no connective tissue membrane or lining, 22 cases; (2) a single cyst with definite connective tissue lining of varying thickness, 6 cases; (3) a small cyst or cysts within a solid mass of ostitis fibrosa, 6 cases; (4) no cyst, but the bony shell filled with a solid mass of ostitis fibrosa, 7 cases; (5) multilocular cysts, 6 cases; (6) a miscellaneous group in which the data were incomplete or the cases complicated by the presence of other disease condition, 12 cases.

It is noteworthy that in the above group only a small number, about 10 percent, were purely ostitis fibrosa without cysts. In only one of the three cases which we have seen was cyst formation a feature. Lewis believes that degeneration of the proliferated fibrous tissue, with resulting liquefaction may give rise to the cysts.

Grossly the intact periosteum, the character of the cyst fluid, and the peculiar fibrous character of the medullary substance are stated to

(*). Presented before the Section on Surgery of the Indiana State Medical Association, Indianapolis session, September, 1921.

be of diagnostic value, on exploratory incision, in differentiating ostitis fibrosa from sarcoma.

ETIOLOGY.—The etiology of ostitis fibrosa is entirely obscure. Only a brief summary will be given of the various explanations offered. Many regard it as the result of some injurious agent or irritation. The statement is occasionally found, both in English and in German literature, that if the bone marrow is analogous to a parenchymatous organ such as the liver, ostitis fibrosa might be compared to cirrhosis. This analogy is not perfect since cirrhosis is general throughout the organ and there remain recognizable liver cells between the strands of fibrous tissue, while in ostitis fibrosa the condition is local, and where perfectly formed there are no recognizable remnants of marrow substance. Furthermore, ostitis fibrosa does not confine itself to the marrow spaces of the bone but invades the dense bony shell, causing separation, absorption and rarefaction of the lamellæ. Bloodgood describes the fibrous tissue as inflammatory in nature, and the term ostitis fibrosa itself implies inflammation of bone with fibrous proliferation, but no one as yet has presented evidence as to the character of the injurious agent or irritation which calls forth this proliferation of fibrous tissue.

Various disturbances of metabolism and abnormalities of endocrine function have been thought of as causes. But a metabolic deficiency or abnormality should exert its influence rather diffusely throughout the skeletal system, whereas ostitis fibrosa is a local, not a general, condition. Occasionally ostitis fibrosa occurs in one having a history of previous systemic disease such as rickets. This was true in one of the cases here reported, but such is not of sufficient frequency to be of significance. No hereditary nor familial occurrence has been noted, and there is no evidence of the occurrence in one sex more frequently than in the other.

Ostitis fibrosa is often indexed among tumors, which is probably as much for the sake of convenience as it is for definite evidence of neoplastic character. In the sections which I have studied microscopically the cells resemble a purposeless uniform proliferation of connective tissue, rather than granulation tissue resulting from the action of any injurious agent. Some slight infiltration with inflammatory cells, of mononuclear type, is present in some areas but no more than is frequently seen in areas about benign tumors. Ostitis fibrosa yields readily to surgical treatment where the involvement is not too extensive. Incision and curettage of the involved medulla, in suitable cases supplemented by bone grafts, frequently interrupts the course of the disease and a return to normal condition follows. Obviously such a procedure cannot be expected to remove all the overgrowth of fibrotic tissue, and in this particular

the disease presents a striking contrast to neoplasms for neoplastic growth does not subside upon partial removal. No metastases are formed, and the course of the disease would mark it as unquestionably benign should we assume it to be a neoplastic growth. Benign neoplasms usually have a capsule and regularly have a sharply defined margin of growth. These features are conspicuously absent in ostitis fibrosa, for the lesion has an indefinite margin and the growth of fibrous tissue is distinctly infiltrative in character. Should this disease be admitted as a neoplastic growth it would almost belong in a class by itself, since it has few features in common with other neoplasms.

Some authorities believe that by a process of metaplasia the bony tissue has given rise to a proliferation of cells of a fibrous tissue character. This view probably has as many supporters as has either of the other attempted explanations, notwithstanding that modern pathologists are very conservative concerning the possibility of a fixed tissue undergoing a metaplasia into a distinctly different type of cells.

In the first case reported by Dr. Oliver the x-ray pictures taken at intervals of months during a period of years showed a progressive involvement extending finally throughout the shaft of one femur and appearing later in the upper end of the opposite one. We believed this might be an obscure infection with some organism of low virulence. Accordingly the following procedures were instituted: Dr. Oliver performed incision and curettage of the recently involved femur, using most careful precautions to exclude contaminating organisms. No cysts were found, so scrapings from the involved medulla were planted in a wide variety of specially prepared culture media. Among these were dextrose-serum-agar containing bits of fresh bone medulla obtained aseptically from the ribs of a young dog. Others contained splenic pulp similarly obtained. Serum-broth similarly enriched with fresh living tissue was also used. Tubes so prepared were incubated both aerobically, anaerobically and with partial exclusion of oxygen. No bacteria of any kind grew in any of the tubes in a period of two weeks during which daily observations were made.

Portions of the involved bone from two of the cases here reported were sectioned and prepared with stains for bacteria. A careful microscopic search resulted in no organisms of any kind being found in any of the sections. These results coincide with those of others who have had negative results in attempting to demonstrate bacterial infection as a causative factor in ostitis fibrosa.

A further discussion of the etiology of ostitis fibrosa is not profitable at this time. It remains

one of the few diseases in which progress in diagnosis and treatment has far outstripped an understanding of the nature of the cause.

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DISCUSSION

DR. CHARLES M. MIX (Muncie): The outstanding thing in the clinical diagnosis of this condition is the fact that practically all of these cases will come to their physician with a history of fracture without trauma. Such cases of course are subjected to the x-ray now and peculiar conditions are found which should lead to correct diagnosis. The x-ray is a very important feature, and of course the pathological examination makes the diagnosis complete.

Perhaps it is not wise to theorize or comment much on the etiology of this condition which is admitted not to be definitely settled, and likewise the nature of the pathology. I would like to make this comment, however. In dealing with fractures and with osteomyelitis, with sarcoma, with lues or syphilis of the bone, we have two processes going on there simultaneously or at different periods—a rarefying process and a productive process. I think we can safely say that in ostitis fibrosa we have a disturbance in the normal metabolism of the bone—perhaps that is not exactly the right word, but there is a disturbance of the normal growth of the bone. We have in this condition a rarefying process beyond the normal in the formation of the cyst, and we have a proliferating process which produces a fibrous tissue.

In regard to the treatment, we are not likely to get into many difficulties. Apparently almost anything you do helps. A pathological fracture apparently has a tendency to initiate a cure. A curettage and thorough scraping out certainly starts a process which tends toward cure. So if we can differentiate this from sarcoma we are pretty safe, and we are still safe because any radical operation for sarcoma of the bone has been abandoned. So even then your palliative treatment helps. I just wonder, inasmuch as this is a fairly new condition and diagnosis of bone tumor is obviously difficult, if some of the cases which Coley reports as cured by the use of his toxin, may not have been cases where diagnosis was wrong and we might have been dealing with some such condition as this.

DR. G. D. MARSHALL (Kokomo): In noting the radiographs thrown on the screen there was but one that seemed a typical ostitis fibrosa. Ostitis fibrosa is usually more uniform in outline. Most cases involve the shaft and the enlargement of the bone is more fusiform than the cases we have seen here.

The etiology of ostitis fibrosa or of bone cyst is a matter of considerable conjecture. In

ostitis fibrosa, Jones suggests that the treatment be a multiple-longitudinal incision of the periosteum with relief of weight bearing on the bone.

Personally, I think most of these cases are the result of focal infection. I have had a case in my own practice in which the woman had been subject to long continued pelvic infection with involvement of the phalanges. This evidently had been a proliferative inflammatory condition with decalcification of the bone which led to cyst formation, and this condition followed by eburnation of bone. This patient had a chronic salpingitis. The right tube was a pus sack, with the periodical evacuation of pus from this pyosalpinx. So she had been subject to continued infection.

PUERPERAL ECLAMPSIA*

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Puerperal eclampsia is one of those diseases so dramatic and so terrifying in their effect that the question of the nature of the disease has always been overshadowed by the question of treatment. The first and very natural thought of almost every obstetrician is, since this disease is bound up with pregnancy, "What is the best way to terminate the pregnancy, thereby curing the disease." This attitude is wrong. In the first place some of the most terrible cases of eclampsia have come up following delivery; there apparently having been no prodromes. Moreover, there are many cases where a very rapid delivery has seemingly not influenced the eclamptic condition in any way. Entirely aside from the question of whether to treat the disease according to the radical or conservative method, nothing will really be learned of this dreadful condition until much more is done in the study of these fulminating cases. The three questions which should be taken up are: (1) What is the nature of eclampsia? (2) How may it be foreshadowed or prevented? and (3) How shall it be treated when it has reached its terrifying climax?

In the first place, what is the nature of eclampsia? The popular theory is that it is indissolubly bound up with nephritis. It remains to be seen whether or not this is true. Every medical student knows that urine of the gravida should be examined frequently in order to forecast eclampsia. It does not take very much experience to discover that many cases of eclampsia are ushered into full bloom with the merest traces of albumen, and that many a woman carries albumen and granular casts chronically and does not become eclamptic. On the other hand we have seen cases of florid

(*). Read before the Section on Medicine of the Indiana State Medical Association at the Indianapolis session, September, 1921.

eclampsia who give a history of scarlet fever in infancy, no evidences of nephritis in the intervening time with the eclamptic attack many years following—the history of early nephritis having been all but forgotten. It may be that careful prenatal observation will be able to correlate these diverse findings; but to date, about all we have to go on is preparedness and watchful waiting.

In many women, the entire metabolism seems perverted, from the time of impregnation until they are relieved of what seems to be a foreign body. Whether this is a true protein poisoning or an endocrine disturbance is yet to be worked out. Much work is being done and the advocates of the endocrine theory think that much can be done by supplying various hormones. I will say that the very worst case of eclampsia I have ever seen was a young girl of 19 years, who had a complete thyroid extirpation when she was 13 years old, and it was very evident that she was suffering from a thyroid deficiency. The usual treatment of eclampsia suggests that the profession in general has the opinion that the origin of this trouble is in the intestinal tract, and certain it is that the premonitory symptoms are relieved, if not cured, by prompt attention to the enunctories. However, we cannot say that auto-intoxication explains the fulgurant cases of eclampsia, which are so sudden in their onset and so fatal. In 1911, Abderhalden presented his theory that the syncytial cells are thrown into the blood stream from the placenta, and that in normal blood a hemolytic ferment is developed which digests these cells, that where this ferment is not developed a protein poisoning develops. Thus we have three unproved occasions for eclampsia, which are: the overwhelming of the system by massive intestinal intoxication, the endocrine disturbances, and the lack of development in the blood of a proper defense to the cells thrown from the placenta.

Which leads me to the second phase of my subject: How may eclampsia be foreshadowed? The routine examination of urine is no new thing and needs no advocate. Albumen in the urine in the voided specimen means little or nothing. The presence of casts, especially of the granular type, is much more disquieting. The 24 hour quantity should be frequently measured and compared with the intake. After trouble has developed and the patient is in the hospital, this comparison of output and intake should include the approximate measurement of the water content of the stools. This is important. The blood pressure should be taken at frequent intervals and furnishes one of the best indicators of impending trouble. It is desirable, even if no trouble comes, to have an idea of what the patient's normal reading is.

Along this same line it is routine to have at least one phenol-sulphone-phthalein test before the onset of labor. The patient should be often asked as to her vision, and her eye-grounds often examined. Retinal exudates and hemorrhages are among the most classical signs of impending eclampsia. The subjective signs the women complain of are bladder irritability, which includes scantiness and frequency, pain, etc.; headaches, and swellings which are not important as long as confined to the feet, but when found in the hands and face are very important; black spots before the eyes, and drowsiness. The objective signs are mounting blood pressure, chemical and microscopic pathological condition in the urine, and positive eye signs. These signs do not differentiate between true eclampsia and uremia, and indeed only the clinical course and the response to treatment are the means we have found, so far, of differentiating true and spurious eclampsia. There is no reason why a nephritis, chronic in type and due to an old scarlet fever, to repeated attacks of tonsilitis, to bad teeth or chorea, or to the thousand and one causes for nephritis, might not be an underlying occasion for kidney deficiency, to which the added burden of pregnancy might mean a serious breakdown of the kidneys, but that is not true eclampsia. On the other hand, we often find placenta with infarcts where there has been the possibility of a long absorption of dead placental tissue into the general circulation with consequent protein poisoning.

There are two classical treatments for eclampsia, and each has ardent advocates; the conservative and the radical. Edgar, *A. M. A. Journal*, August, 1919, declares that 8 to 10 percent of eclampsia die regardless of treatment, and that 80 to 90 percent will recover under conservative treatment, which does not include shock producing operations nor shock producing drugs. The conservative treatment hopes to give the patient time to recover from her toxemia before emptying the uterus, and the radical advocates declare that the toxemia will not be relieved until the uterus is emptied; therefore, they demand as early emptying as is compatible with safety. My thought is this: We are dealing with a disease the causation of which we do not know. We do know, however, that the mortality is high both for the mother and the child. We know that in all probability the primipara will empty slowly if left to her own devices, and that equally probable, the multipara will be much quicker. We must not overlook the possibilities of uterine inertia, however, in either case. We also recognize the child as a foreign body, and in the presence of a mounting systolic pressure we know we cannot delay too long. If there ever was a disease where we are to be justified in treating each case as an individual this is the disease.

The conservative treatment is outlined by Dr. Ross McPherson of New York as follows: Take the blood pressure. Wash out the stomach and before withdrawing the tube introduce two ounces of castor oil. Give colon irrigations of five gallons of 5 percent glucose solution and control convulsions by administration of large doses of morphine. The initial dose is one-half grain, repeated in one-fourth grain doses until the respirations fall to 8 per minute and convulsions are under control. If systolic pressure is 175 mm. Hg or over, phlebotomy is practiced until the pressure reaches 150 mm. Hg. Under this method he claims in 67 true convulsive toxemias the mortality showed a maternal mortality of 7.4 percent and a fetal mortality of 28.59 percent. While under radical treatment maternal mortality is 30 percent and fetal mortality is 40 percent. The danger of morphinism to the mother is not so great as might be expected as the uterine contractions tend to bring out the patient; it is, however, very hard on the child if delivery is effected before the effect of the morphine wears off, asphyxia resulting.

The radical emptying of the uterus is followed by every possible means of elimination. Cæsarian section is, undoubtedly, the quickest means of emptying the uterus, and is, in certain cases, justifiable; but it is also undoubtedly one of the most serious of operations because of the poor condition of the mother. In a multipara where it is fairly reasonable to believe that the uterus can be quickly emptied, it is better to induce with pituitrin or manually dilate the cervix, or with Champetier de Ribes bag, and either apply forceps or do a Braxton-Hicks. The action of pituitrin is very fleeting, and I have no hesitancy in giving a full cc. where the emergency is great. I prefer, however, to give five minim doses q. 2 hours until a cc. is given, the whilst giving castor oil or croton oil by mouth if the patient is able to take or by tube if she is not. At the same time a Watkins enema is given, followed by copious proctolysis and a hot pack with ice to the head. In favorable cases Veratrone is employed, but it is a treacherous drug, and is not given if the pulse is faltering any or is even slow and heavy. This fairly conservative treatment can be interrupted at any time for more radical measures.

To revert to the question of Cæsarian section, it must not be forgotten that we have to deal with the situation in hand, but we have also to protect the woman in her future deliveries; and section once practiced does not necessarily inhibit future vaginal deliveries, but it certainly increases their risk. If a section can be reasonably avoided, it should be avoided; but on the other hand, if there is any possibility of its

being done, every effort should be made to prevent contamination of the vaginal passages.

So much for antepartum eclampsia. To recapitulate: In the presence of increasing albumen, casts, stupor, diminished urine, positive eye signs and mounting blood pressure, put the patient to bed and stimulate elimination every way possible; if convulsions appear, either control with large doses of morphine, or, in the presence of increasing systolic pressure, empty the uterus by section or forced vaginal delivery.

A much more serious situation is postpartum eclampsia, for the obvious reason that the uterus is already emptied. Phlebotomy, if done, will make for a blood concentration and should not be done without being followed by a replacement of fluid lost, either by intravenous or by proctolysis. Someone has suggested that salt solution should not be used as salt may be absorbed and add to the already present edema and tap water is better. It has also been considered that glucose will stimulate the glycogenic function of the liver, which function is greatly interfered with in eclampsia. I believe that both morphine and veratrum are very depressing and should be used, if at all, with the greatest caution in postpartum eclampsia. The blood pressure should be taken frequently and not be allowed to fall with too marked rapidity, as your patient will surely die from myocardial failure. Strophanthine has been a great comfort to me in the presence of failing myocardium. Uterine contraction should be stimulated by ergot, ice bags and pituitrin in order to see that no membranes or clots are being retained. The bladder should be emptied by catheter at regular intervals for the purpose of study. The main reliance should be on stimulation of the skin by hot packs and of the bowel. Each case should be watched closely and treated empirically. Lumbar puncture, in continued convulsions, is advised.

These fulminant cases of eclampsia are not seen in private practice as they used to be because of the prenatal care that is being given by all doctors. Even in hospital work the dispensaries have done much in the way of prevention. We can never know how many cases might have been eclamptic but for prenatal care.

It is not too much to hope that in time the newer blood chemistry will be able to differentiate between what is primarily renal and what is cardiac in the so-called cardio-renal cases. No one will dispute that eclampsia and uremia are very similar, but it is possible in given cases to differentiate between the two clinically, and certainly at postmortem. For instance, in eclampsia you have a sudden rise of objective symptoms and their subsidence after the removal of the offending cause. In true uremia

the renal disturbance is present long after delivery. At autopsy in uremia you have the swollen capsule of the kidneys with choked glomeruli, but without much change in the liver; whereas, in eclampsia you find the fatty necrosis of the liver with fatty degeneration and edema of the brain. The kidney disturbance in eclampsia is probably secondary. So far, there has not been a great deal of work done on eclampsia, but there has been a great deal of work done on uremia. For one thing in eclampsia, you are faced with a situation demanding immediate conclusions in the vast majority of cases, and it takes time to work out a conclusion from the blood. But as in a case as given below, the case was delivered and a true diagnosis was made subsequently, certainly the blood chemistry was of the greatest value.

In normal pregnancy there has been found a slight nitrogen retention and that the figures for toxemia do not rise much above what is found normally, namely: 40-6 mgs. urea per 100 cc. of blood, which indicates that there is a normal acidosis found in the pregnant state. Moreover, the starvation which is more or less present in any labor case, plus the anesthetic, might be the occasion of any increase of acidosis. The acidity of the blood has been found to be increased in the presence of convulsions and in proportion to the number and severity of the convulsions. The carbon-dioxide combining power is reduced in the presence of toxemia, which also tends toward the acidosis theory; the variations met with, however, are slight. Cholesterol is usually increased and lecithin is diminished. If acetone is found it is of strong diagnostic importance. Clinically, the amount of soda necessary to render the soda alkaline is a slight indication of the systemic acidosis, although, of course, it has little or no effect on the blood, which is necessarily an alkaline fluid. Creatinine increase is of very bad prognosis, also an increase of Ambard's coefficient, both of which signs are of renal insufficiency. It is to date impossible to distinguish between the blood signs of these diseases, and it is extremely desirable to work along these lines in order that more may be learned of the causation of eclampsia, as only in this way is it possible to intelligently hope to do much, either in the way of prevention or cure.

A young woman, age 26, was brought into the hospital with a general and very marked anasarca, not in labor. The urine showed nothing abnormal, and her phenol-sulphone-phthalein test for two hours was 82 percent. She was put to bed on a limited fluid diet, but with no other treatment. The first 24 hours her intake was 1000 cc. and her output was 3000 cc. approximately. First stage pains came on and were borne with a most hysterical attitude. Her anasarca melted away. With the subsidence of her

edema she had a convulsion, and her blood pressure, which had been systolic 140 mm. Hg, went to 200 mm. Hg during the convulsion. Her mental state became very torpid, and her urine practically nil. Forceps were applied and a living child withdrawn. The creatinine was only slightly increased, the other blood analyses being negative in their readings. Blood nitrogen was done, Ambard's coefficient found, etc. Had this case gone on she would have been a serious case of true eclampsia, the diagnosis resting on the increased blood pressure, the urine findings, the increase of creatinine, and the absolute torpor; and I believe the condition resulted from the blood concentration, which came about when the edema disappeared.

Another young woman came into the hospital with most violent convulsions following one another in close succession. No urine could be obtained. She gave a history obtained from her husband of intense headaches for the two days preceding the onset of her convulsions. Magnesium sulphate was given by the tube, ether anesthetic was given, a Braxton-Hicks was done, and a dead seven months fetus was withdrawn. Convulsions did not stop and a phlebotomy was done, withdrawing 800 cc. of blood which was replaced by normal salt intravenous. Glucose was given by proctolysis q. 6 hours for several days. Hot packs were given twice. After several weeks the urine still contained a trace of albumen. This patient had retinal hemorrhagic exudates. Her vision at the end of three weeks was impaired. She remained in coma for three days. Her senses were obtunded for some little time, and there are at least two weeks gone out of her life of which she has no recollection at all. This is very characteristic of true eclampsia.

Conclusions. Blood chemistry was done on two supposedly eclamptic cases of mine recently. One case, age 39, a primipara at term, came to my service in the City Hospital. Her pressure, on admission, was 165-90. Her urine had albumen 4 plus, and many granular casts. Her mentality was perfectly clear. She was given castor oil by mouth, and a Watkins enema, followed by a prolonged colon flushing and a hot pack. Under this care her systolic pressure rose to 210. her eye grounds were negative and her urea 226 mg., creatinine 18 mg. per 100 cc. of blood. Although she had no convulsions because she was a primipara and age 39, and because her pressure was high, a Cæsarian section was done and she was delivered of a living child. Had this case been subjected to a slow vaginal delivery, she might have become eclamptic; but certainly, in the absence of convulsions, and in the presence of a perfectly clear mentality, I should hesitate to call her anything more than a potential eclamptic.

On the other hand there was admitted to the hospital a white woman, age 22, who gave a history of scarlet fever in infancy, with nothing intervening until this illness. She had complained of severe headaches the day before entering the hospital, and had seen her doctor, who had examined a specimen of urine and had given her a free purge. She entered the hospital in a deep coma, and all told had ten convulsions. Her blood pressure was never over 160, but her pulse was rapid. No urine was obtained by catheter on her entry. The eye grounds showed both exudates and hemorrhages; creatinine was 1.48 per 100 cc. and urea was 52.4 mg. per 100 cc., the urea being slightly high. Conservative treatment did not influence the progress of the disease and she was dilated with bags, and delivered of a dead child. She did not regain consciousness, and died following a profuse postpartum hemorrhage.

Neither of these cases shows any appreciable alteration in their blood chemistry. I have given pituitrin to eclamptics both to assist in inducing labor and to form contractions following delivery. I always give it with the cuff on the arm, and so far have seen no deleterious results on the blood pressure from its administration. I do not favor the use of veratrum because it is a depressing drug in the first place and in the second place it is aimed not at the cause underlying the high blood pressure, but at the blood pressure itself. Now the blood is one of nature's defenses and little good can be obtained by striking blindly.

Except in extremely grave cases I do not use antepartum phlebotomy. These patients usually bleed at delivery, how much we never know beforehand, so that a previous blood letting may let the defenses down too low. A postpartum venesection is oftentimes of greatest value.

In conclusion: Eclampsia is a condition associated with pregnancy, the importance of which cannot be overestimated. Not much is known at the present time as to the causation of the disease. Early emptying of the uterus in a forcible manner is not always a wise procedure as the patient is not a good surgical risk. The dangers are: death from shock, from hemorrhage and from exhaustion. High blood pressure is not in itself a thing to be feared, as it is in the nature of a protection to the patient. Also high blood pressure by itself is not an indication of impending eclampsia. There are a good many causes of high blood pressure, which may be present without nephritis and many a case of hypertension may go through labor without eclampsia. The conservative treatment is the treatment of choice. Prenatal work will prevent many a case of eclampsia, and this will include careful watching of the urine, the comparison of intake and output of fluid,

the phenosulphthalein test, the regular use of the sphygmomanometer and ophthalmoscope. Rest in bed, purgation and an alkaline diet, at any evidence of nephritis, will enable many a woman to carry her pregnancy to a successful end who might, without observation, have been one of the many victims of this dreadful disease.

DISCUSSION

DR. CHARLES S. BOND (Richmond): I know of nothing which the doctor encounters that is so demoralizing and humiliating as eclampsia. It is so sudden in its onset, it brings terror to everyone in the house, and something must be done immediately to relieve the difficulty. The attacks come on in women close to term, and they are much more frequent in primipara than in multipara. The whole question seems to me to be one of pressure, the placing of the body of the child against returning currents of blood in the mother. Another thing we must think of is that the mother is taking care of the sewage of two persons. She is not alone taking care of her own creatinin and so on, but as the child grows more work must be done, and I think the argument holds good all the way through that it is a question of wastes being thrown into the blood of the mother which she is not able to care for through her avenues of sewage function.

If the mother in infancy has had scarlet fever and has kidneys already blocked to a certain extent, it stands to reason that this mother would have difficulty long before a normal one would. If therefore pressure is the fundamental factor, if it is a gradual filling of the body with waste material that it cannot eliminate, then the argument would be all in favor of getting the cause away as soon as possible. I have had eight cases of eclampsia and the eight women are now living, and if I were called again in such a case I would go back to the same treatment, that is, the delivery of the child, without great haste, but as soon as possible.

Prevention of course is the means to be resorted to in case the patient consult the doctor in time. When albumen occurs in the urine and the feet, hands and face become swollen, the patient should be given liberally of Epsom salts, and from 2 to 10 drops of spirits of glo-noin in one-fourth glass of water every two or three hours until the swelling has disappeared. The albumen is of little consequence if not accompanied with general anasarca. If this plan is followed you should have very few cases of eclampsia.

DR. ELMER E. MORGAN* (Fort Wayne): I want to object to the application of forceps in an eclampsia. You can do a podalic version according to the method of Potter and do much less harm than by applying forceps.

*Deceased.

DR. WILLIAM F. SMITH (Huntington): This is a subject that I am much interested in and I wish to compliment the essayist. In 1904 I had five cases of eclampsia, not all my own, and in none of them had I examined the urine. In one case the mother went into convulsions about the time I was called, there was no dilatation whatever, so I did manual dilatation and delivered a breech case. I pushed up the breech and brought the child down and delivered it. This is a very interesting subject to me. In this series of five cases we saved all the mothers but one, and two of the babies were lost. In this one mother the delivery did not seem to help her. She was very toxic. She was delivered about five o'clock and died about six and the convulsions never stopped before death.

DR. CHARLES H. GOON (Huntington): Of all the tragedies of the lying-in room nothing strikes such terror as eclampsia, and anything we can listen to that will help to prevent this is certainly worthy of fullest consideration. We have had a splendid paper. I have had thirty-six cases of eclampsia in thirty-five years' practice, with twenty-eight recoveries and eight deaths. I think that is an average record. In a paper presented before the American Gynecological Association this year about 30 to 35 percent was the death rate given, and I wish to congratulate Dr. Bond on his experience.

DR. MORRIS H. C. JOHNSON (Vincennes): I would like to ask what experience Dr. Ketcham has had in the dislocation of joints in cases of eclampsia, whether it is usual to examine patients for such dislocation following delivery.

DR. JANE KETCHAM (closing): In response to Dr. Johnson's question, I think there is no danger of dislocation of the shoulders during delivery in using the anesthetic, but I know of cases where a woman has had dislocation following pulling on straps.

In response to Dr. Bond, in regard to types of presentation in eclampsia—I feel that position has nothing to do with the disease. I have had several cases of breech presentation in eclampsia, and one case of twins where both children were breech presentation with eclampsia. This was a very fulminant case. The woman was six-parous and had had eclampsia in the last four pregnancies. She came into the hospital in convulsions and had one after another until death occurred after twenty-four hours.

As has been said repeatedly, this is one of the most dramatic situations that ever occurs in any case. The family is always more or less stirred up; they all think the patient is going to die, and when you add to this terrifying disease, the advice to the doctor is to sit tight and not start in to deliver, it is hard on both the

family and the doctor. You should try to control the toxemia before you add to the situation the shock of delivery. Very often the shock of delivery is the last straw, and if you can just sit tight until the overwhelming toxemia is controlled, the obstetric risk is improved for both mother and child.

OPERATIVE INJURY OF THE HEPATIC AND COMMON BILE DUCTS

METHODS OF AVOIDANCE AND REPAIR*

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Kehr, Rio Branco, Descomps, Ruge, Kunze and Pantaloni have, long ago, described practically every type of anomaly of the bile ducts and of the biliary blood vessels. Recently Eisendrath and Behrend have verified these original observations.

Kehr evidently considers these biliary anomalies of considerable surgical importance, since he devotes many pages in his "Praxis der Gallenwege Chirurgie" to their exposition. In particular he emphasizes these anomalies in their relationship to ectomy and as factors in the production of operative duct injury.

The purposes of this paper are to briefly review the more common anomalies of the biliary ducts and blood vessels, to consider the usual types of duct injuries, to describe the methods of repair of such injuries and finally to define the methods of avoidance of these duct injuries.

TYPES OF CYSTIC DUCTS.—I. The so-called classic type of cystic duct is where an acute angle is formed by the union of the cystic and hepatic ducts, and this type is found in 75 percent of cases.

II. The parallel type of duct is that form in which the cystic duct parallels the hepatic for some distance before uniting with it. This parallel type is divided into two varieties; the short parallel variety is where the duct unites with the hepatic duct before the upper surface of the duodenum is reached and occurs in 5 percent of cases. The long parallel variety of cystic duct occurs in 12 percent of cases and is that variety where the cystic duct unites with the hepatic beneath the duodenum.

III. The spiral variety of cystic duct is that type wherein the duct either crosses on top of the hepatic duct or winds beneath it, to enter the left aspect of the hepatic duct; spiral cystic ducts are found in 8 percent of cases.

In the preceding, I have used Eisendrath's percentages since he has studied a large number of cadavers and, by first injecting the ducts with warm bismuth paste and then radiographing them, he has secured a greater degree of accuracy.

(*) Presented with lantern slide demonstration before the Section on Surgery, Indiana State Medical Association, Indianapolis session, September, 1921.

ANOMALIES OF THE HEPATIC DUCTS.—The anomalies of the hepatic ducts are as follows: An accessory hepatic duct may, (a) empty into the right hepatic; or (b) into the main hepatic; or (c) empty into the angle of junction of the cystic and main hepatic ducts; or (d) may empty into the cystic duct. The right hepatic duct may empty into the cystic duct or vice versa.

Other unusual anomalies of the biliary duct system are, a double common duct with a communication between the cystic and main hepatic ducts, or, two accessory hepatic ducts emptying into the gall bladder. (Kehr's cases.)

ANOMALIES OF THE BILIARY BLOOD VESSELS.—In one-third of all cases, the cystic artery has its origin from the common hepatic and not from the right hepatic branch of the hepatic artery. Under such circumstances, the cystic artery crosses on top of the hepatic duct. In 12 percent of cases, two cystic arteries are present, both of which do not necessarily come from the right hepatic branch of the common hepatic artery. Not infrequently, an anomalous artery may originate from the gastro-duodenalis, and run upwards in an oblique direction to the gall-bladder, crossing the common duct in its course. This vessel may be the cystic artery or may be an accessory vessel.

THE VARYING RELATIONSHIPS OF THE HEPATIC DUCT AND ARTERY, THE PORTAL VEIN AND THE COMMON DUCT.—The interval separating the hepatic duct and artery varies from immediate apposition to 25 mm. Not infrequently one overlaps the other. The multiplicity of possible deviations from the supposed normal are so numerous that sufficient space for their description cannot be given in such a limited paper as this.

CLASSIFICATION OF OPERATIVE DUCT INJURIES.—These injuries are here classified as to their time of occurrence, *i. e.*, whether recognized at the time of their production or later. Here I again quote Eisendrath as his is a practical working classification. He has collected 51 cases of duct injuries, due, he states, either to errors in technique or to anatomical variations of the structures concerned.

Eisendrath has classified duct injuries in four groups:

I. Those cases in which the injury was recognized at the time of operation, or shortly thereafter, and immediate repair instituted. This group affords the majority of cases reported—26.

II. Those cases, four in Eisendrath's report, in which an immediate or early repair of the injury was not successful, necessitating a secondary operation.

III. In fourteen cases, the injury was overlooked at the time of the primary operation, a secondary attempt only at repair being made, and this usually for stricture.

IV. Miscellaneous cases; exemplified by such cases as that of Delageniere, quoted by Kehr, wherein accidental division of the ducts, during ectomy, was followed by recovery, or as in two cases of Moynihan's, where the ducts were divided, a split tube inserted and recovery ensued. A further example of this miscellaneous group is the case of Lilenthal, wherein the hepatic duct was ligated, the accident going unnoticed until icterus developed. This patient died.

MODES OF DUCT INJURY.—I. Tear or resection of one or all of the ducts may occur at the site of union, one with another. Undue traction on the gall bladder during ectomy or the placing of a forceps, somewhat blindly on the cystic duct, as in the instance of a large empyema of the gall bladder where it is not desirable to aspirate first, are factors in the production of this type of duct injury. Likewise, the presence of anomalous or multiple blood vessels, wherein vicious hemorrhage ensues from an unexpected source for one reason or another, resulting in hasty and blind but ill-advised attempts at control of such bleeding, make for duct injuries.

II. Tear, division or ligation of the main hepatic or common ducts during separation of the ampulla of the gall-bladder or the stripping free of an adherent parallel cystic duct, can occur. Complete division of the common duct where a spiral cystic duct obtains, may occur, as where a clamp has been applied for any one of several reasons, at right angles to the duct.

III. The common duct may be torn, divided or ligated, due to efforts to control bleeding coming from the depths of the operative field, or the duct may be split in the removal of a stone, which is tightly wedged. A scallop from the wall of the duct may be removed by the application of a clamp to the terminal end of the cystic duct, by making the application too close to the common duct. Efforts to grasp the spurting end of an anomalous artery, originating from the gastro-duodenalis and coursing upwards to the gall-bladder, may result in crushing or ligaturing the duct.

IV. Various anomalies of the ducts being possible and fairly common, it is not particularly difficult to divide or ligate any one of the ducts if due care is not exercised.

METHODS OF REPAIR.—I. The so-called ideal methods of repair are usually not applicable except in recent cases. A. Circular suture, somewhat after the technique of Carrell's blood vessel suture, is perhaps the best procedure. B. A rubber tube may be utilized in circular suture in several ways, thus: there may be made an end-to-end anastomosis of the common duct over the tube, which is allowed to emerge either thru a separate opening in the duct or thru the ampulla of Vater (traversing the entire length

of the common duct). Again, the transduodenal method of Voelcker or Hoerz, wherein an end-to-end anastomosis of the duct is made over a rubber tube which is allowed to emerge thru a separate opening in the duodenum, may be found useful.

II. Incomplete repair may be made by incomplete circular suture, in which the T-tube of Kehr or a plain rubber tube (passed onward thru the ampulla of Vater), may be utilized. In this type of repair, only the posterior wall of the duct can be sutured and a cuff of omentum may be applied at the site of suture for further security.

III. Hepatico-duodenostomy after the technique of Witzel, Coffey or W. J. Mayo may be found to be applicable in some instances.

IV. A flap from the stomach, colon, or cystic duct or gall-bladder (if available) might be employed to bridge the gap in the walls of the duct. This has been done successfully by Kehr.

METHODS OF AVOIDANCE OF DUCT INJURIES. —The special factors of safety are:

I. Knowledge of possible vessel and duct anomalies.

II. Methods of control of unexpected and alarming hemorrhage: (a) finger compression of Pantoloni, by utilizing the forefinger in and beneath the gastro-hepatic omentum, the thumb being applied on top of this structure; (b) avoidance of hasty blind clamping; (c) feeling the vessel spurt against the finger and applying a clamp only after quick sponging of the site of bleeding to clean the field, under direct vision of the bleeding vessel.

III. Aspiration, by means of a fine hypodermic needle and syringe, of any structure, if in doubt as to its identity, *i. e.*, whether portal vein, hepatic artery or the duct.

IV. Ligate or clamp all strands of suspicious tissues (referring here more particularly to anomalous vessels) doubly before dividing.

GENERAL FACTORS OF SAFETY.—I. Ample incisions should be employed so that adequate exposure of the operative field is obtained. Kehr's Bogenschnitt and Wellenschnitt are useful incisions; likewise Bevan's hockey stick incision, supplemented by an additional angulation to the right at the lower end serves well frequently.

II. Proper placing of sponges is important. When possible, a sponge should be placed beneath the foramen of Winslow so as to elevate the structures contained in the gastro-hepatic fold. Masson's method of producing elevation of the liver by the insertion of a sponge pack between the upper surface of the liver and the diaphragm may be found useful. I have no experience with this procedure.

III. Proper delivery of the liver by traction after the plan of Mayo-Robson is of great importance.

IV. Behrend considers the opening of the anterior leaf of the hepato-duodenal ligament and the identification of the supra-duodenal portion of the common duct to be the most cogent factor of safety.

V. The separation of the ampulla of the gall-bladder from the common duct should be done with the utmost caution, followed by the identification and exposure of the cystic, hepatic and common ducts and the cystic artery. Due consideration for the possible anomalies of ducts and blood vessels should be made. The cystic artery should be ligated preferably close to the neck of the gall-bladder and complete isolation of cystic duct and artery should be carried out before such ligation is done, if at all possible.

VI. All other factors being equal, if the common duct is to be opened, the site of election is the supra-duodenal portion.

VII. At all stages of an ectomy or a cholecystotomy, it is well to keep in mind the possibility of an anomaly of either the gall-bladder, the gall ducts or of the biliary blood vessels, being present.

DISCUSSION

DR. H. O. SHAFER (Rochester, Indiana): In removing the gall bladder I dissect it, sometimes split it, and go down to the cystic duct; but I think if we remove all of the cystic duct we may do more harm than if we leave a portion. My experience over quite a few years has not made me want to change that technique. I feel the patient is in better shape and there is less damage done in the abdomen. The ease with which it is done is so much more apparent to me than to clamp off the cystic duct and work up.

One of the things that has worried me in surgery of the badly infected gall bladder is the infection we may get that goes to the liver or the pleura. I have had cases of empyema of the gall bladder which resulted in empyema of the chest by direct continuity.

As to the closure of the wound, I do not think that is the thing to do. I think the cigarette drain naturally takes care of that. I believe also that when we remove a stone from the common duct the best thing is to put in a small tube down to the common duct with a couple of cigarette drains, and these cases get well. Nature does wonderful things toward relieving that bile in the normal way, and if we do not completely sever the common duct nature will take care of it. It seems to me that drainage there is safer than any operative procedure we might do. Further, I might say that I believe in our gall bladder cases, taking them as they come, year in and year out, our mortality is higher than in any other cases. Within the last year I had four ruptured gall bladder cases in the hospital at one time. I do not suppose it will ever happen to me again. In three of

these cases I removed the gall bladder completely. In the fourth with only drainage, gangrene had set in and the patient died from extensive necrosis.

I believe in these cases we must take care of our patients first—remembering that anomalies may get us into trouble, but always playing safe, draining and letting nature do the things which she is always so kindly doing for us.

DR. GOETHE LINK (Indianapolis): In my experience more than fifteen percent of all gall bladder and bile duct cases have required operation upon the common duct; but every one of these cases had, at one time, been strictly a gall bladder case. Therefore, in dealing with a large percentage of common duct cases I was dealing with neglected pathology. There are a number of reasons for this, but let us pass them by saying that we do not operate our gall bladder cases early enough.

A surgeon should bear in mind that fifteen percent of these cases of gall bladder surgery are common duct cases and he should go further in his surgery than some of us have been going. He should explore the common duct more often. It has been definitely demonstrated that frequently we cannot palpate stones in the common duct when they are present. If the common duct is dilated, if there has been jaundice, if there has been leukocytosis and high temperature, the common duct should be opened and explored, and in order to do that we should have knowledge of the very anatomy that Doctor Bonn has shown us so nicely.

The common duct should not only be explored more often, but it should be treated by drainage; the drainage Doctor Shafer insists upon should extend to the common duct. The sphincter of Oddi should be dilated and a T-tube fastened in the common duct. We should have more surgery done in this region which Doctor Bonn has so well elucidated.

DR. B. VAN SWERINGEN (Fort Wayne): I want to take issue with this statement about drainage of the common duct. From an educational standpoint I do not see why anybody wants to drain the common duct. If the operation has been done properly, the common duct will have been cleared of all stones that are in it and drainage through the duct will have been instituted. Then the way is clear for anything in the common duct to be carried along with the bile as it makes its escape into the bowel. To my mind T-tube drainage of the common duct is absolutely worse than useless. It keeps up the nausea after operation, provokes vomiting as long as the T-tube is in there, and also gives rise to considerable distress which amounts to actual pain.

I am not averse, however, to drainage; but not drainage of this duct. I think that is absolutely contraindicated. A tube or drain surrounded by gauze laid in the bed of the gall

bladder and down to the common duct is all that is indicated, and that is all that is necessary to insure perfect apposition and closure of the peritoneum covering the gall bladder.

DR. JAMES J. MOOREHEAD (Terre Haute): A few years ago in Chicago, while engaged in research work regarding the duodenum—to determine whether this portion of the gastro-intestinal canal is essential to life—I inspected carefully the biliary tract in a large number of the dogs used in the work. Anatomical anomalies such as have been so well described by Dr. Bonn were occasionally noted.

A complete duodenectomy required transplanting the common bile duct into the jejunum. Following considerable experimentation with other methods we adopted this simple procedure: A jejunal opening was made of just sufficient size to permit the duct to be drawn into the lumen of the bowel by a thread armed with two needles; this tractor was tied 2.5 cm. distally; one sero-serous suture effected closure around the duct. The pancreatic duct was likewise transplanted.

DR. ERNEST I. BRENNER (Winchester): Just one question in regard to the drainage of the common duct. In these cases of common duct involvement we always have a cholangitis. That means that we have inflammation, and if we have inflammation we must have some obstruction at the ampulla. If that is so, if we do not put drainage into the common duct the inflammation will close off our opening and we defeat our end in that we do not get "free" drainage.

DR. A. S. JAEGER (Indianapolis): We know the question of how best to deal surgically with gall bladder diseases has been under discussion for a long time and probably will be until as long as each surgeon has his individual method of doing his work. The question of whether one should drain the common duct depends on the individual case upon which one is working. Doctor Link favors draining the common duct. So do I, but I know he will admit there are cases he does not so drain because it is not indicated. But I believe everyone will admit that it is not very good to close the abdomen without some form of drainage, whether directly into the common duct or not.

Just so long as most of us refuse to admit that we may have gall stones which do not originate **within the gall bladder** we will have trouble. Just so long will they operate such cases, the patient recovering nicely from the operation and then coming back after a while complaining of the original trouble. His biliary tract has not been properly drained, for the infection in the bladder is the result of a condition which originated outside the gall bladder, and the effect has been removed but not the cause. Consequently there is sooner or later a recrudescence of the primary pathology.

DR. H. K. BONN (closing): Dr. Van Sweringen says that pain and distress is always present when a T-tube has been used. Yet Deaver reports a patient who has worn a T-tube for three years without discomfort.

I cannot see how a common duct, from which stones and debris have been removed, can be expected to carry bile into the duodenum when we consider that this same common duct must have been somewhat irritated in removing the stones, and that inflammatory changes of some degree will occur, which may block the duct temporarily. It appears to me that a T-tube, properly placed, will carry away the bile and afford the common duct the necessary rest to permit the inflammation to subside. Dr. Link has stated my position exactly in regard to common duct drainage.

In order not to leave a wrong impression, permit me to state that I believe in T-tube common duct drainage whenever indicated. I do not believe in closing the abdomen without drainage after simple cholecystostomy but prefer using a cigarette drain to the stump of the cystic duct as a factor of safety.

LUDWIG'S ANGINA*

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In presenting this subject I make no pretense of having anything original, but wish to review very briefly what has been said in the past about this very grave and often fatal disease, and to report a case which began in a very unusual manner.

We as otolaryngologists should be more familiar with the diseases and anatomical relations of the head and neck and thereby better fitted to treat this disease intelligently.

In Dan McKensie's recent work, *Diseases of the Nose, Throat and Ear*, we learn that "septicemic pharyno-tonsilitis, variously known as gangrenous sore throat, acute cellulitis, acute edema of the pharynx, and perhaps most generally as Ludwig's Angina, is a rare and peculiarly virulent, often fatal, affection of the throat and cervical cellular tissue, characterized by intense and widespread local inflammation, and by profound and often rapidly fatal toxemia.

"It is a form of septic cellulitis or erysipelas of the submaxillary region and neck, secondary to a streptococcic or pneumococcic glossitis. It is characterized by the formation of a hard, brawny swelling of the parts under the jaw, and in the upper cervical region. The floor of the mouth, the fauces, the pharynx, and the larynx participate in the general phlegmonous swelling, and severe constitutional disturbances co-exist. There is grave danger of life from

septicemia, from edema of the glottis, and later from exhaustion."

Other English and Continental writers have given us information concerning this condition, with numerous case reports, but in this country comparatively little attention has been paid to it, at least if one may judge from the paucity of the literature. Many text-books by American authors do not even mention it, and during the past ten years only a few scattered case reports have been made public.

There also exists a good deal of confusion in regard to the name itself. Newcomb remarks that it is always unfortunate to attach the name of an individual to a pathological process, for while it may at first serve for more ready identification of the condition, subsequent study is almost certain to modify its clinical significance; and because the name gives neither anatomical nor pathological clew it can easily become both misleading and confusing. In this particular case, the title is unusually inappropriate, for Ludwig of Stuttgart, after whom it was named, was not really the first to publish an account of it. His observations appeared in 1836, but there is a record which leaves no doubt that the condition had been definitely described long before Ludwig's time.

In 1822, Dr. George Gregory published in London an account of the illness, death and post-mortem of one Ann Jones, housemaid, aged 25, who presented, on admission to the hospital, "pains in the neck, with fever and great difficulty in swallowing, swelling and tenderness all about the neck, but especially at the junction of the clavicles with the sternum, from which no essential relief was obtained by bleeding or purging." The disease progressed rapidly, breathing became so impeded that the tongue assumed a "blue colour", and "to relieve this, blood was twice drawn from the arm, but the alleviation was very momentary". Despite the continued bleeding, the patient managed to survive seven days. When the autopsy was performed, it was found that "the cellular membrane beneath the skin of the throat and around the trachea was everywhere in a state of disease, and the same disorganized condition of the membrane pervaded the whole extent of the anterior mediastinum, even as low as the point of the fusiform cartilage." To this singular variety of quinsy, "Dr. Gregory ventures to apply the term *cynanche cellularis*, from a belief that it has not yet received any more appropriate appellation".

This article makes reference to three earlier writers, Mr. James, of Exeter, in his work on *Inflammation* (p. 188), Dr. Kirkland, in his *Enquiry into the Present State of Medical Surgery* (Vol. 2, p. 159), and Dr. Wells, whose "case of extensive gangrene of the cellular membrane between the muscles and skin of the neck and chest" which he reported to the Society for

*Read before the Section on Ophthalmology and Otolaryngology of the Indiana State Medical Association at the Indianapolis session, September, 1921.

the Improvement of Medical and Chirurgical Knowledge on May 2, 1809. This seems to be the first description of this condition ever published. In his account Dr. Wells informs us that the patient's illness began by her feeling "a pain in her bosom and collarbones and being often chilly. These ailments were attributed to her staying much in a room the doors and windows of which were frequently open". Then "the left cheek began to be painful, red and swollen. This disease of the cheek was at first thought to arise from a bad tooth, but as it increased quickly, an apothecary was sent for. The swelling and redness * * * had now reached the left clavicle and * * * the apothecary conceived that those symptoms depended upon an inflammation of the parotid gland".

Dr. Wells, called in consultation by the "apothecary", was unable to relieve the patient, and she died on the third day after his first visit. After much "reluctance" he gained permission to make a post-mortem examination. "When an incision was made through the skin of the thorax, a very fetid liquor of a dark brown color flowed out, the quantity of which * * * was estimated to exceed half a pint. Upon turning the skin aside, a most hideous sight presented itself, the whole cellular membrane, which covered the muscles upon the fore part and sides of the neck and chest, being discovered to be in a state of gangrene".

The description of these early cases is not very different from the most recently published clinical records. R. W. Parker, in 1879, published an extensive historical resume of what had been written concerning cellulitis of the neck, or "angina Ludovici" up to his time, and sixteen years later, James E. Newcomb read a paper before the American Laryngological Association, which contained additional collected cases. But during the past twenty-five years, despite the great advance made in all branches of otology and laryngology the literature concerning the condition is very scanty. The most recent authoritative pronouncement regarding it seems to be that of Dr. Halphen who, in 1918, had this to say to the surgeons of the Fourth French Army:

True Ludwig's Angina, very rare, is characterized by the gravity of the general symptoms, the patient being prostrated almost before the pus collection has had time to form. Ludwig's Angina, improper designation (*mauvaise dénomination*) of an affection discovered by Gensoul, five years before Ludwig, can be called an angina only because of the extreme anguish of the final period. It is really a hypertoxic form of gangrenous phlegmon of the floor of the mouth, similar in form to a massive gangrene in the course of severe wounds of the

limbs, or like that of a suppurative appendicitis. Ludwig defined the condition as a "gangrenous induration of the neck" and enumerated the diagnostic features in this way:

(1) Slight inflammation of the throat itself which even when it is present disappears after a day or two, and which when it persists may be looked upon as of secondary diagnostic importance; (2) a peculiar "wood-like" condition of the connective tissue, which does not pit on pressure; (3) a hard swelling under the tongue, with a bolster-like swelling around the interior of the lower jaw, of a deep red or bluish-red color; (4) a uniform spread of this induration in such a way that it is always sharply bordered by a zone of entirely unaffected cellular tissue; (5) escape of the glands, although the disease attacks their cellular-tissue surroundings and may even commence therein.

It is noticeable that all subsequent writers agree with Ludwig in the first four features, but that there is much difference of opinion in regard to the fifth.

A modern definition from the clinical side is given by Gerster, an American writer: "A phlegmonous destruction of the submaxillary gland, characterized by alarming and extensive dense edema, caused by the unyielding character of the fascial envelope of the gland; which edema is most manifest about the latter's vicinity, *i. e.*, occupies the floor of the mouth". It will be noticed that most of the modern definitions limit the inflammatory focus to the submaxillary gland, while the earlier ones include a much more extensive area.

Thomas (Annals of Surgery 1908) in a very exhaustive article says the location of the submaxillary gland between the posterior border of the mylohyoid and the middle constrictor muscles is responsible for the rapid development of the edema of the glottis in Ludwig's angina, and that the infection is usually due to the streptococcus.

It is noticeable in examining the various case reports, how often the history contains reference to various dental difficulties, which *at first* were thought to be the cause of the cellulitis. Many of the victims were young people between twenty and twenty-five, in whom the eruption of the posterior molars may have been suppressed or have given rise to infection for other reasons. Yet Hamann, writing in 1899, appears to be among the first to state that he believed cervical suppuration to be generally due to such a cause. "*Dental and peridental affections are the most common causes of extensive submaxillary suppurations. Any septic process in the mouth, however, is likely to be followed by lymphatic and glandular abscess.*" In one of the severest cases I have ever seen, the infection began in the tonsil. Scarlatinal and diphtheric inflammations may lead to the most serious cervical abscesses, which are at times associated

with sloughing and gangrene. It is probably cases of this sort that Ludwig saw when he first described the disease."

As the glands in the submaxillary region receive the lymph from the oral cavity, they are generally the ones primarily affected. The deep cervical fascia have an important influence in determining the course of abscesses and in directing the spread and extension of inflammatory products; but more than the fascial layers themselves, the spaces or intervals between the various organs of the neck, where the connective tissue is rather lax, allowing mobility of the parts, permit the inflammatory process to extend and the pus to infiltrate the tissue.

The submaxillary gland is enclosed in a rather firm fascial covering, from which fibrous bands extend in various directions. Around it, however, there is considerable loose, connective tissue. When inflammation of the submaxillary gland, or of the lymph glands contained within its fascial investment, occurs, there will be tension on the capsule, and a marked collateral edema of the surrounding parts. As dense tissue surrounds the infected area, the likelihood of sloughing and gangrene is very great while the swelling and inflammatory induration of the tissues may lead to compression of the respiratory passages and edema of the loose, submucous tissue. So, even if the process begins in the submaxillary region, it is practically certain to extend, sometimes as far as the opposite side of the neck.

The previsceral space of Henke lies between the trachea, larynx and thyroid gland, and the ribbon-like muscle in front of them: if an abscess forms here, it may exert pressure upon the air passages and extend into the anterior mediastinum. There is a third connective tissue space around the great blood vessels of the neck, upon which lie the deep, cervical lymph glands. An abscess located here will raise the sterno-mastoid muscle, gather between this muscle and the trachea, or possibly descend into the mediastinum. Postpharyngeal abscesses may occur in the retrovisceral space behind the esophagus and pharynx;—and, there is still another space at the lower end of the sternomastoid, posterior to which are the great vessels of the neck and the scalene muscles and from which there is communication with the axilla, as well as the space about the carotid artery and jugular vein.

Newcomb describes the symptoms as both constitutional—either sthenic or asthenic type—and local, presenting the following diagnostic points:

(1) A wooden-like induration of the affected region, sharply defined from the surrounding normal tissue; (2) the thrusting forward and upward (by the accumulating inflammatory products) of the tongue toward the

palatal vault; (3) severe dyspnea with the attendant danger of laryngeal edema; (4) the presence of a hard pad or button-like swelling at the internal aspect of the dental arcade. All of these occur with general pain, redness, heat and swelling of the cervical region; "that is", the classic symptoms of a phlegmon. Swallowing is painful, if not impossible. Usually, the mouth can hardly be opened, as the muscles performing this function are partly imbedded in the infiltrated cellular tissue and partly participate in the inflammation. This is especially true of the mylohyoid, which, being the muscular floor of the mouth, is raised in deglutition.

The prognosis is grave. Newcomb (1895) gives a mortality of 43 percent. More modern surgical methods and earlier diagnosis have somewhat reduced these figures, but even today the outcome is very often fatal.

Early, free and deep incision, rigid antisepsis and general supportive treatment offer the only chance of cure. Gerster says emphatically, "In angina Ludovici, there is great necessity of early and ample incision. The object is not so much to evacuate pus as to relieve tension." He regards the submaxillary gland as the focus of mischief, and attaches a practically pathognomonic importance to the fact that pressure over the edematous area rarely elicits pain except directly over the gland. Even if the patient is unconscious, such pressure will cause unmistakable signs of distress, and if these appear, there is no excuse for delay. "There being no 'pointing' as in an ordinary abscess; therefore, we must first expose the entire area of the gland. In a typical case, the gland will be found more or less disintegrated, and inside its original connective envelope is ichorous fluid or thin, offensive pus."

There is a form of cellulitis of the floor of the mouth which affects the sublingual region only, which is usually of dental origin. This type of infection may be drained by a free sublingual incision, and oftentimes such cases, if only slight, recover spontaneously. But these are in no sense typical Ludwig angina, as previously described.

A case of this type came under my observation, referred to me by Dr. N. E. Harold. Mr. R., age 39 years, had a molar tooth extracted, which was followed in 24 hours by a swelling in the floor of the mouth, considerable pain, difficulty in swallowing and some obstruction to breathing, the last due to swelling and elevation of the tongue, and upward pressure of the floor of the mouth.

There was no involvement of the submaxillary region. The induration was localized to the sublingual region only and did not at any time extend farther. The patient was sent to the Deaconess Hospital, a free sublingual incision was made under local anesthesia, releasing a moderate amount of pus. On account of

the edematous condition of the sublingual mucosa, drainage was not satisfactory; yet, after two weeks of streptococcic delirium, the patient recovered.

This case would have recovered much more safely and quickly had the incision been made externally through the mylohyoid muscle.

It should be borne in mind that general anesthesia is not safe in such cases, unless one is prepared to do a hurried tracheotomy. Local anesthesia should always be used if possible, and best used with scopolamine and morphine.

The case I wish to report differed from the usual in that the parotid gland was the first to become involved, and from the findings on the first examination (which were a slight ulceration on the gums and the mouth of Steno's duct, and a clearly negative pharynx), led me to believe that the infection in this case extended through the parotid duct to the parotid gland, thence spreading downward, and forward, through the lymphatic channels.

CASE REPORT—Mrs. W. S. H., age 62 years.
Family history—Neg. **Personal history**—No illness since childhood.

On May 23, 1920, the patient complained of a soreness on the inner side of right cheek in the region of the upper first molar, which she attributed to an ulceration she had had on the gums. Two days later she noticed a hard swelling in the parotid region, which rapidly grew worse. About eight hours after the parotid swelling began, I saw the case with Dr. N. E. Harold.

We found a marked board-like swelling of the parotid region, the right cheek, and the submaxillary region—the temperature 102, pulse, 118, respiration 22. Within eight hours the swelling had extended to the floor of the mouth, and almost to the clavical on the same side. The mouth could not be opened, and the tongue was pressing upwards tightly against the teeth. The pressure on the pharynx together with an edema of the glottis was causing very great difficulty in breathing. A diagnosis of Ludwig's Angina was made, and immediate operation advised. Sixteen hours after beginning of the parotid swelling, we operated on her under morphine and scopolamine, ether anesthesia, at the City Hospital as a private patient. A deep incision was made from the lower border of the parotid gland downward and forward, down to and through the deep fascia, to the median line, cutting the anterior belly of the digastric, partly exposing the larger vessels, the submaxillary glands, and the submaxillary lymph nodes. Connecting this incision with a deep incision upwards through the full length of the mylohyoid muscle which opened the floor of the mouth and exposed the sublingual glands. The glands were opened and a moderate amount of cheesy purulent material was released. The pressure on the floor of the mouth and larynx

was immediately relieved, and breathing became easy. The wound was left open, and dressed with moist boric acid gauze, which was changed every four hours for the first few days. Strych. gr. 1/40 was given every four hours, together with other supportive treatment, under the direction of Dr. N. E. Harold.

The temperature following the operation ranged between 98.6 and 99.8 and after three weeks the patient left the hospital. The wound was entirely healed in five weeks.

There was an interesting feature about the parotid gland in this case, as it sloughed out so completely within five days that the facial nerve could be plainly seen, lying free in the wound.

There was a question as to local or general anesthetic in this case, but with the enormous swelling and extensive incision contemplated, we decided in favor of morphine, scopolamine and ether. We were prepared, however, to tracheotomize at any moment, but such was not necessary.

I have seen within the last few years in consultation two other cases of Ludwig's Angina, both resulting fatally, which I mention only to emphasize what has been said in regard to early and free incision. In one of these cases the incision was insufficient, due to a faulty local anesthesia. And in the other, incision was done under general anesthesia, was free enough but was done too late, I think four days after the onset.

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DISCUSSION

DR. HARRY BOYD-SNEE (South Bend): I recall a case which developed Ludwig's angina as a complication in the course of an acute suppurative streptococcic epiglottitis. The initial primary infection made its appearance as an unilateral inflammatory reaction presenting submucosal edematous infiltration which was definitely limited to the right side of the epiglottis. Within a few hours a destructive superficial ulcerative process supervened which was followed by extension of the infection into the sublingual region manifesting itself clinically as a typical Ludwig's angina. The complication

was treated surgically through an incision similar to that described by the essayist. In spite of the operation performed the disease progressed to a general involvement of the deep structures in the neck on the right side extending into the mediastinal region which condition necessitated a secondary operation. This case came to a fatal termination through general sepsis.

DR. DAVID F. BERRY (Indianapolis): My personal experience is limited to two cases of pseudo-angina. Both recovered without surgery.

I wish to accentuate the necessity for an early diagnosis. If dealing with a genuine Ludwig, insist on immediate operation. Boldness, but not recklessness, in operation. This is no field for timidity. The patient's life depends on thorough drainage established early, with a minimum of shock.

I believe the knife less objectionable than the Pacquelin cautery, as advocated by some able surgeons, for incising the swollen tissues. The cautery destroys tissue far beyond the line of incision and as there is usually extensive destruction of tissue from the infective process, it seems more fitting to avoid adding a complication.

I have personally known of two cases operated under general anesthesia, both resulting fatally. I believe the unhappy results were facilitated by general anesthesia. Local anesthesia is greatly to be preferred.

Henri Aboulker, of Algiers, reports ten cases of genuine Ludwig, five of which he operated under general anesthesia with four deaths. Five cases operated with local anesthesia, all recovered. He advocates the use of 1-200 sol. of novocaine, 1 minim of 1-1000 sol. of adrenalin to each c.c. colored with methylene blue. This enables the surgeon to see, as he dissects, if his infiltration of tissues has been adequate to control pain.

PHYSICAL INEQUALITY OF SCHOOL CHILDREN*

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There is a great difference in the intellectual advancement of school children. Some are naturally bright because of their inheritance and favorable opportunities; others in the same grade progress slowly under adverse conditions. The advancement of the backward children is hindered, in many cases, by correctable causes. The love of study may even be destroyed under the load of physical imperfections. Before the school year begins in the autumn parents of backward children seek the advice of physicians

(*) Read before the Section on Medicine of the Indiana State Medical Association at the Indianapolis session, September, 1921.

with the hope that their children will advance as rapidly as any in that grade.

There is a close union between parents and their children; whether it is due to associations, to blood ties or to love is a mooted question. The origin of the family feeling is not of much importance as long as both parents and children recognize the relationship, and are dutiful to each other and the state.

Because of their age and previous experiences, parents have a better knowledge than their children of the needs and preparations to meet the battles of life. The correction of physical defects should not be left optional with children. If the young are determined to rule in matters that are detrimental to their future good, they must abide by the consequences, which is very much opposed to the wishes of the parents.

Families are associated very closely and intimately with physicians. All the physical and mental ills are told to the family physician. Much of a physician's work is a mystery to the laity. The lack of human anatomy and physiology may be the reason why so many seek the opinion of those who are familiar with the subjects. This great confidence is an honor and a responsibility that should be appreciated by all members of the profession. To be worthy of this great confidence a physician should always be honest with his clientele, and live the open and honest life of the "Meek and Lowly One".

Parents have a natural interest in the progress of their children. They may even shield them in wrong because of the family pride and parental love. If blind to the errors of their children, the court accomplishes most when the judge administers the mantle of charity instead of the iron rule of censure.

In children who are mentally defective, mothers do not generally recognize the lack of mentality until it is pointed out to them. Normal or slightly abnormal children look and act the same until they are from two to five years old. Cases of myxedema or imbeciles may show their mental defectiveness earlier. Parental devotion is real; the great motherly love of which poets sing is normal. The same is true in the lower animals; many a mother will defend her offspring against enemies rather than save her own life.

To recognize the love and intense interest that parents have for their children is to acknowledge the ideals and desires that parents want their children physically fit when they enter school. Teachers and officers of the law tell us that children who are physically normal do better work and are more obedient than those who are physically defective. Many children are outdistanced in school work by their inferiors because of some physical hindrance that could be corrected easily. Children are born with

different abilities; the laws of eugenics are uncontrollable, but descent is not the only consideration. I acknowledge that inheritance is the power that can drive the world, and that all stock can be improved by correct breeding, but this paper refers only to physical unfitness, to acquired imperfections, and not to inheritance. As good blood may become impoverished by avoidable infections, so good qualities may be submerged by physical unfitness.

An educational propaganda along the line of physical inequalities has been carried on by lectures, magazine articles and the daily papers. There is no real law or ethics that opposes such movements, yet there is a so-called "gentleman's law" that frowns upon anything along the line of medical education to the laity. It is unethical to entertain anything along the line of quackery, and perhaps the medical profession considers all educational propaganda by the various magazines and dailies as quackery. We, as a profession, may be right in our opposition, but the changes that have taken place in the attitude of the public would indicate that we are losing ground. The tide of professional opposition has been battered down by the advocates of better hygienic surroundings and better manhood. It is evident that the opposition cannot stop the propaganda of better children, better mothers and better men.

There are enthusiasts *in and out* of the profession. How much and what to teach the laity is an unsettled question. Ten years ago no one would have attempted to teach sex hygiene in our public schools, yet it is being practiced today; and besides, the laity is being taught many other things that may be detrimental in the future. The opposition may allude to acts of indiscretion due to the educational propaganda; but even this may be displaced by *good*, which generally predominates. Statistics ten years hence will tell whether the state has progressed or retrograded.

In 1900, before the Indiana State Medical Association, I read a paper on "The Evils of Mouth-Breathing". In that paper I stated that about 30 percent of the population breathed through the mouth, and that *man* was the only animal that had acquired the habit. It was also shown that mouth-breathing caused many disagreeable symptoms and pathologies, such as lack of proper aeration of the blood, causing anemia; interference with natural drainage of the sinuses of the nose and ears; interference with the recovery of all continued fevers, as typhoid, pneumonia, etc.; and most sore throats. The conditions have improved very much, but there are still a few correctable causes.

The class with deformed jaws and nose baffle the skill of surgeons and dentists. The condition was caused by inheritance followed with mouth-breathing. Many of these cases can be avoided by following the advice of the welfare

stations and teaching parents that it is possible to educate away from inheritance, if begun early. Thus, in the distant future, there can be no nasal or oral deformities because the mouth and nose will be ideal. Twenty-five years ago, parents, teachers and many physicians believed that nasal respiration was not essential to good health. At that time from one-fourth to three-fourths of the pupils in each school room were afflicted with some physical defect that might have been corrected, if the family physician had given his consent. Hence, the educational propaganda that has been going on without the assistance of the family physician. Physicians, teachers and parents agree that pupils should be physically fit for school work and that all pupils should be given an opportunity for mental as well as physical development.

It is supposed that those in charge of welfare stations, and physicians in general, have the ability to tell the intellectual status of all children brought to them. It is not right nor honorable to make parents believe that their offspring is normal when they are mental defectives. The time, energy and money spent upon morons is wasted. Limitation of time in this paper will not allow even a suggestion, or remedy. Most errors by parents or teachers are made through ignorance of the subject. It may not be universal, but it is a safe rule—remove the cause, and nature will correct the pathology.

The intelligence of a community can be measured by the number that are wearing glasses. This can easily be verified by visiting any old college town. The eyes of school children have been shamefully neglected because only twelve out of one hundred are born with normal eyes. The errors of refraction exist, even if glasses are not worn. Will the discussants please explain? I have seen children who were kept out of school, assigned to a dark room, taking medicine (internal of course) for anemia, when a pair of glasses cured them. It is easy to remember that 88 percent of all eyes are too short, or too long or are irregular in curvatures. Nothing will correct such a physical defect but a pair of glasses. It is unfortunate to the children of school age that they must suffer for the errors, misunderstandings and superstition of their parents. Many are of the belief that glasses make one old, that the wearing of glasses compels one to always wear them. Glasses not only makes the wearer younger, but they act as a tonic to the eyes. Will the discussants please explain?

For convenience, the physically unfit are divided into the rich, the intermediate class and the poor. There should be a distinction between the worthy and the unworthy poor, because the deserving poor are generally a fine class, having

clean and pure blood, but unfortunately financially poor. There are not so many defectives among the rich because their children are well nourished, being an argument in favor of the malnutrition supporters. The children of the rich may suffer from excessive protein diet, causing irregularity in school attendance. The middle class is composed of our best citizenship—they are the bulwark of the nation and state, and should be physically normal. The poor—well, if this class is divided into the worthy and unworthy, I will gladly give my time to the former, but the latter, which make up the shiftless, uncertain and dishonest, are not worthy of scientific attention. Will the discussants please tell what to do with them?

We are not responsible for our existence, nor are any of the children in or out of school. It matters not to which class the parents may belong, if a child is physically crooked it should be made straight. Human passions are animal passions. Intermarriage may improve stock, as given in Plato's Ideal Republic; but eugenically speaking, the *desideratum* is not always reached, as illustrated in the mentality of our United States senate.

Money is essential to a livelihood, but the greatest pleasure in any of the branches in the practice of medicine is the gratitude of one's patients. To correct physical defects in the poor, and make them physically fit for school, and see them, by their own efforts, passing to the middle or dependable class, is certainly a pleasure, and compensates for all gratuitous work. If in the discussion of this subject means can be reached by which the poor of a community can be made physically fit for school work, and the teachers can cause a regeneration of previous mental impulses by instilling "pep" and ambition into those same delinquent patients, it will enhance the future good of the medical profession with more cash and fewer book accounts.

ADDENDA:—Most diseases are due to infection. It matters not whether the trouble lies in the teeth, tonsils, ears, eyes, heart, alimentary canal, kidneys or elsewhere, to be efficient for school work all physical defects should be corrected. Malnutrition may not be a disease, but the schools of the state have demonstrated that it can be cured with pure milk and hygienic living. Physicians and nurses will have the gratitude of future generations for their good work. Nurses would do well to advise the correction of defects at the beginning instead of at the close of the vacation. Nurses and family physicians need not be so positive in their assertions to parents and children. They are not expected to know as much on refraction as the ophthalmologist, nor of the nose and throat as the rhinologist. A little consideration of the specialist's opinion will not affect their standing

with their families. To make children fit for school is to put them all upon the same equality. If all physical hindrances are corrected, the system will reconstruct because it constantly tends towards the normal.

Some physicians assert, "The doctor who depends upon iron tonics to overcome anemia; who uses sprays for chronic nasal catarrh; gargle for sore throats; internal medicines for rhinitis; who prescribes a dark room for sore eyes; who gives powders or pills for headache; who smokes into an ear for earache; who puts fresh beefsteak upon erysipelas; who prescribes cough medicines for a cough; who prescribes Lane's tea, or its like, for constipation; who prescribes diuretics for incontinence—in short, the doctor who is not 'up' on everything that pertains to medicine and surgery should prepare himself, or the public, as it is being educated, will consider the profession antiquated and not informed upon scientific medicine."

To throw oil upon the troubled waters, there are occasions when medicines are indicated. Patients at least get well from taking medicine, or in spite of the prescription. These laboratory men have surely thrown something into our quiet camp that smells. It is up to us to remove the same or prove its falsity.

DISCUSSION

DR. ADA E. SCHWEITZER (Indianapolis): Studies made by the Division of Child Hygiene upon the physical and mental status of children in our public schools show that children are frequently classed as retarded or defective mentally who after the removal of some physical handicap progress rapidly in the school curriculum. Although considerable attention has in recent years been given to the removal of defects of school children there still remains a large number who have had no especial attention given to health. Some of these children are vigorous and capable. Others are anemic, lack vitality and are unable to make satisfactory progress. The welfare of the latter class should be a sufficient incentive to regular and systematic health inspection of the children.

Among the causes of physical inequalities, we discover heredity, environment, malnutrition, habits and acquired defects.

Some children progress well along certain lines, but lack the ability to comprehend certain types of instruction. Nervous instability manifesting itself in the lack of coordination and failure of concentration is a defect which hinders the progress of many children. Children may inherit also physical deformities which make them inferior to other children because of the impossibility of certain kinds of activity.

The home atmosphere should be fresh and clean, both from the sanitary and social standpoint. Children do not thrive well in bad air or under unwholesome normal conditions. Quite

often a child's lack of progress at school may be traced to closed windows, to insufficient sleep, to incorrect habits of diet and exercise.

Probably the most talked of defect is poor nutrition. However, so many different standards have been used by persons who have set out to determine whether or not there are poorly nourished children in our schools that we are compelled always to ask the basis of the judgment. Even when we find children below weight for height we must know the reason for underweight. The reasons for underweight are many. It frequently happens that the child without regard to his social status is poorly nourished because he gets too little food or because he is not getting a well balanced diet. The pampered child of the rich parent is quite as likely to be poorly nourished from these causes as the child of the poor parents. In the case of the poor child, it is necessary to supply suitable food. An endeavor to do this in the case of all poorly nourished children has resulted in the establishment of milk lunches in a large number of our public schools. These, however, should be adapted to the conditions found. There are instances where they fail to give the desired results from the nutritional standpoint and these failures are potent arguments for a complete physical examination of the child and an investigation of his habits and history to determine the cause of poor nutrition.

Remedial defects should always be given attention before the child starts to school. Inability to measure up to correct standards of vision should mean a visit to the oculist. One authority states that 95 percent of school children have defective teeth. In our own work, we have found an average of two dental defects to every child. Some children are born defective in the mineral salts which are necessary to healthy teeth. Other children whose teeth originally are sound allow them to become defective through lack of care. Regular inspection of the teeth two or four times a year by a competent dentist, together with the correction of any defects found, would greatly improve this deplorable situation among our school children.

Among the acquired defects we find that we may trace many of them to neglected colds and other acute infections all too common in early childhood. If parents could only realize the many evils that follow in the train of these infections there would be no child willingly or willfully exposed to any of them. Frequent among these defects are poor hearing, enlarged tonsils, adenoid growths, chronic nervous irritability, inadequacy of heart valves or heart muscles and often chronic rheumatism and chronic colitis. Any of these physical defects will make the child possessing it less able to compete satisfactorily with his fellows.

Much greater interest and activity must be shown both by physicians and by lay persons

before we shall even ameliorate these conditions. To get back to the original causes of many of them, we must begin with the education and the better scientific care of the expectant mother. The specialty of obstetrics must rank in importance with the specialty of surgery. The proper care and nutrition of both mother and child must in some way be provided for. As the writer has said, "That civilization is delinquent which neglects the best interests of its children."

DR. GEORGE V. CRING (Portland): I think that this subject is of extreme importance and the inequalities have been very well presented in detail by Dr. Spohn and Dr. Schweitzer, but it is one that has received far from the attention it deserves from the medical profession, and the practical side of it should be considered more seriously. I cannot see how any man having the education Indiana demands for a medical license would question the possibilities of great good and benefit to the individuals and to their respective communities from the medical examination of school children. Everyone surely must admit the existence of the inequalities and the desirability for correction. The recognition of defects, their correction, and the benefits and degree of perfection desired to be attained will vary greatly in different localities, depending upon both the professional and the lay education along health lines. The time is past when it is sane to think that all physicians have equal knowledge or ability or that they possess the same professional sincerity and moral consciousness which will lead them to do even the best they can under the existing circumstances.

Medical school inspection is not a fad nor an innovation but has been practiced for about thirty years or more. That it is not more popular and more successful does not count against it for the same holds true of modern medical science and I believe the same influences check its advance. What these influences are cannot be discussed in a few minutes, but are certainly worth the consideration of the Society. One of the greatest of these influences, I believe, is the lack of popular knowledge of conditions which call for the help of a medical adviser, and another, the knowledge of what constitutes or characterizes a capable and dependable physician.

I was interested to read in a recent number of the *Journal of the A. M. A.* the following extract which I think has considerable bearing upon this subject: "The Public Health Officer must sell the idea of the use of the practitioner for physical examinations and medical supervision as a means of preventing disease.

"It behooves the A. M. A. to have the largest concept of its responsibility to the public and the physicians at large in the matter of prevention. The science of medicine is today, perhaps, from five to ten years in advance of its general application. The A. M. A. is giving

the widest recognition to scientific advancement but it is not, I believe, pressing as energetically as it might for the wider application of the knowledge already at hand."

And also the following editorial in our last *Indiana State Journal*: "The success of the quacks and irregulars depends upon advertising, but even advertising would not have helped them if the regular medical profession had not failed to acquaint the public with the truth concerning scientific medicine. In reality, we have been too ethical in the sense that we have not taken the public into our confidence but have reasoned that the public ought to have sense enough to know that education, experience and training counts for more than ignorance, inexperience and no training."

The ideas that I wish to emphasize in this discussion are these:

1. It is to be taken for granted that these inequalities exist, are largely capable of correction and it is the general desire to have them corrected.
2. That in our medical school examinations we have the opportunity of discovering them and demonstrating their importance to all concerned.

3. That medical school examinations also afford a splendid way of (1) disseminating a popular knowledge of conditions which call for the help of a medical adviser; (2) of teaching the use of the practitioner for physical and mental examinations and medical supervision as a means of preventing disease; (3) of teaching what constitutes a capable and honorable physician; and (4) of advancing medical science by a better knowledge of the normal and its deviations.

However, to accomplish all these the medical examinations must approach as nearly as possible the ideal of the modern medical science

as practiced in our best teaching hospitals and must not be of the type of inspection and propaganda of the poor medical practice and of the quack and charlatan who without education or equipment claims to be able to diagnose and supervise health conditions without a thorough examination of the individual.

I wish to commend the work of the child welfare department of the State Board of Health as Dr. Schweitzer is putting into practice the best of today's knowledge and raising the standard of work done in this line in the state in the counties visited.

DR. A. W. BRAYTON (Indianapolis): Dr. Schweitzer is doing great work and anything that is doing good work for the children should be upheld. I believe a child's education should be thought of as soon as the child is born. It should be followed until he has gone as far as he is capable of going, or as far as his people are capable of pushing him. I urge upon you each and every one to do all you can to get your children as far as you can in the higher realms of education. Without it this government would not be what it could be or should be.

DR. GEORGE W. SPOHN (closing): I do not believe there is any use in squandering money on children unless they have ability. Let them have ability and then spend money; otherwise not. Practically every school in the city has a room and some three, or four in a department for defectives. Thank fortune, my children are not in that group—but if they should be I would wish them to take the place where they belong. It is impossible to get away from inheritance.

Dr. Schweitzer is to be commended for her work. Not many in the state would give up their time for such small pay. It is a pleasure to correct physical defectives. Dr. Schweitzer and her nurses will reap their rewards hereafter.

SERUM PROPHYLAXIS OF MEASLES

The injection of serum obtained from donors was tried out during a recent epidemic of measles of moderate severity, in Rochester, Minnesota, and the results are reported by Morley D. McNeal, Rochester, Minnesota (*Journal A. M. A.*, Feb. 4, 1922). The donors were free from tuberculosis and syphilis, and had passed through fairly severe attacks of measles, without complications or sequelae. They were bled after an interval of five, seven or nine days from the disappearance of the fever. The serum was bottled in amounts of 6 c.c., preserved with 0.01 percent tricresol, and kept in the icebox until used. After varying periods following exposure, sixteen recipients were given 5 c.c. of the serum, injected into the muscles of the thigh. None of the children had ever had measles,

although they had come in intimate contact with patients during the contagious period. Four of the sixteen developed an extremely mild type of measles, but no complications or sequelae. In three of the four patients, the incubation period was lengthened to nineteen days. Twelve children remained free from measles. One child contracted measles two months after successful inoculation; this suggests that the immunity does not persist longer than sixty days in some cases. The method recommends itself most highly for the prevention of measles during the period of danger, between the ages of 5 months and 6 years, in tuberculous children and in those physically below normal. In institutions in which large numbers of frail children are intimately associated, the procedure would be of great value.

**THE JOURNAL
OF THE
INDIANA STATE MEDICAL ASSOCIATION**

Devoted to the Interests of the Medical Profession of Indiana

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Editor and Manager

Office of Publication, 406 W. Berry St., Ft. Wayne, Ind.

JUNE 15, 1922

EDITORIALS

USE AND ABUSE OF VITAMINES

There probably never was a valuable scientific fact established through careful and accurate research work, medical or otherwise, which was not trailed in a remarkably short time by its abuses. Sometimes these untoward results were in the form of personal calumnies heaped upon the discoverer of a new scientific fact but more commonly the abuse takes the form of shrewd attempts to commercialize upon the philanthropic efforts of truly scientific investigators. There is very justly a taboo upon that medical man who refuses to divulge to his confreres any valuable discovery or information into which he has come, and yet no sooner is it announced than some (or many) powerful commercial organizations grab at the new opportunity to reap fresh financial gains therefrom. True enough, many pharmaceutical houses are willing and glad to aid the medical profession in the proper elucidation of a new product, with the elimination of the chaff from the wheat, but many are proverbially willing to sacrifice scientific fact for pecuniary returns.

So it is with the recently developed vitamines A, B, and C, and one cannot help rejoicing at the lie given to certain manufacturers' claims by the experimental studies of a group of proprietary vitamin products by Hess, Morre and Calvin¹. Antiscorbutic studies were made upon guinea pigs, with three commercial products, metagen, vitamon and a product containing dried orange juice and dessicated pig's liver. Studies on the antineuritic, water soluble vitamin B were made with pigeons. From their work these investigators concluded that while the process of manufacture and subsequent aging of the concentrated vitamin products did not cause as much deterioration of the antineuritic as of the antiscorbutic properties, yet all the products were very low in antiscorbutic qualities. That all the known vitamins can be prepared for dispensing in a concentrated form which will be unaffected by drying, aging and oxidation, is, in the minds of those investigators, open to question. In fact they believe, with other students of the

question, that, except to meet specific indications, as in times of famine and certain economic upheavals, such as in war, the best method of obtaining sufficient vitamins is through a proper selection of foods—in other words, from the dairy, the grocery, and the market, not from the drug store. Among the more potent antiscorbutic foods may be mentioned spinach, turnips, cabbage, tomatoes and the citrus fruits. Likewise the apple and the banana have strong antiscorbutic properties, the latter being especially adaptable since, in this country, at least, it is almost invariably consumed raw and not subjected to such degrees of temperature as needed for canning or desiccation, with the consequent reduction in the amount of the antiscorbutic vitamin.

**X-RAY AND CLINICAL FINDINGS IN
NORMAL CHEST**

(OF CHILDREN SIX TO TEN YEARS OF AGE)

The National Tuberculosis Association has completed some research work that is of much value in increasing our practical knowledge concerning the findings in the chest of normal children up to ten years of age. This knowledge is of particular interest in connection with our study of tuberculosis. In order to establish the x-ray and the clinical finding in a normal child up to ten years of age, three groups of well-known roentgenologists and clinicians were selected. While the value of roentgenography in determining the presence of pulmonary disease has long been recognized, yet much difference of opinion exists in the interpretation of findings, largely because no set observations have been made establishing the variations that may occur in the normal. To one observer, shadows noted are indicative of disease, to another they are not evidence of a pathological process; to one they represent lesions of clinical significance, to another they suggest changes of no moment. It is with a view to correcting these shortcomings that the research committee undertook its work, and an appropriation of twenty thousand dollars was set aside for the expenses of the work. After many months of independent work the members of this research committee in considering the chests of normal children between the ages of six and ten years exchanged conclusions that disclosed almost a unanimity of opinion.

In all, over five hundred children were examined. All children who showed signs of disease were excluded from the series. Individuals from various strata of society, foreign and native born, residents of urban and rural communities, school children and children residing in institutions, children exposed to tuberculosis and some without a history of such exposure, children with and without a history of

previous infectious diseases, all symptom free and all of an approximately normal weight and height for their ages were studied. A history of each individual was recorded and in making the examination of the chest care was always observed to have the child relaxed and to see that no cramped or unnatural posture was assumed, for, as is well known, faulty position may lead to findings that cause confusion in interpretation. In addition, a tuberculin test was made on every child. The clinical data were then assembled, and after the roentgenologist had interpreted his plate independently, the clinical and roentgenographic findings were correlated.

The facts detailed seem to indicate that clinically the ideal normal child is a hypothetic impossibility. Children apparently healthy, symptom free and active, show on careful examination many deviations from fixed standards; variations that must be interpreted as within physiological limits. The studies reported warrant the following conclusions:

(1) The data obtained on percussion and auscultation of the lungs of normal children show wide variations from a fixed standard. These variations are usual and are considered to be within normal limits.

(2) Inasmuch as the changes referred to are dependent often upon alterations that persist as the residua of past infections of the respiratory tract, it is obvious that a careful anamnesis, with special reference to all infections, is necessary if diagnostic errors are to be avoided. Even a history carefully taken is often unreliable, as minimal infections are soon forgotten by many and among the unintelligent classes even more significant indispositions are not readily recalled.

(3) Failure properly to evaluate these deviations from a fixed standard will often lead to the unwarranted diagnosis of disease and to even less justifiable treatment.

(4) With a proper appreciation of the widest variations that the normal may present from the ideal, the informed clinician is better able correctly to understand the findings of the roentgenologist, and each, cooperating with the other, is less liable to error.

(5) D'Espine's sign as indicative of enlarged tracheo-bronchial lymph nodes is of little value.

(6) Recognition of and familiarity with the foregoing data is of cardinal and practical importance to every patient, potential and established. Without a proper appreciation of the facts set forth, no intelligent differentiation between a normal and an abnormal respiratory tract can be made.

THE ST. LOUIS SESSION OF THE AMERICAN MEDICAL ASSOCIATION.

The annual session of the American Medical Association held at St. Louis last month was notable in many respects. First, there was a very large attendance; second, the scientific work was of a high order; third, the Association, through its House of Delegates, accomplished much that is in the interest of the welfare of the individual practitioner.

The sections were well attended, some of them even being crowded, and the papers as well as discussions were of a high order of merit. An elaborate scientific exhibit, the best ever given by the Association, attracted much attention. Even the exhibitors made a special effort to show the effects of advancement in their several specialties, and some of the exhibits were of real scientific merit, especially those which showed the late advances in the use of roentgen and light therapy and the use of electric devices as aids in diagnosis.

In the House of Delegates much attention was centered upon the reports of the various councils and committees, and no little interest was shown in quite a large number of resolutions pertaining to State Medicine, vivisection, revision of the "code of ethics", and abolishment of political hospitals.

Among some of the important resolutions was one recommending that county medical societies be encouraged to make public declaration that their members are prepared and ready to conduct periodic medical examination of persons supposedly in health, it being understood that the indigent only shall be examined free of charge and that all others are expected to pay for such examinations.

Another resolution recommended the establishment of a bureau for consideration of legislation and medico-legal problems in which the whole medical profession may be interested. It will be the function of this bureau to co-ordinate the activities of the several constituent state associations, to ascertain and crystallize the opinions of the medical profession, and to represent the American Medical Association. In all probability this bureau will have Washington as its headquarters, though it may be considered advisable to have the bureau operate from the home office in Chicago.

The Shepherd-Towner law was branded as a product of political expediency, not in the interest of the public welfare but an imported socialistic scheme which unjustly and inequitably taxes the people of some of the states for the benefit of the people of other states for purposes which are lawful charges only upon the people of the said other states. The law was disapproved as a type of undesirable legislation which should be discouraged.

Of much interest to the medical profession and even the public is the resolution on the

Volstead Act which declares that the American Medical Association, representing a membership of over eighty-nine thousand physicians, appeals to the Secretary of the Treasury and to the Congress of the United States for relief from the present unsatisfactory conditions and recommends that provisions be made for supplying bonded whiskey for medicinal use only at a fixed retail price to be established by the government.

Concerning vivisection the Association went on record as endorsing the "open door" policy on the part of all institutions carrying on vivisection for research work, which in reality means the admission of properly endorsed and responsible officers of humane societies for the purpose of observation of such research work.

On the recommendation of the Judicial Council an amendment to the constitution covering the question of medical ethics was adopted. The amendment is as follows:

"Solicitation of patients by physicians as individuals, or collectively in groups by whatsoever name these be called, or by institutions or organizations, whether by circulars or advertisements, or by personal communications, is unprofessional. That does not prohibit ethical institutions from a legitimate advertisement of location, physical surroundings and special class—if any—of patients accommodated. It is equally unprofessional to procure patients by indirection through solicitors or agents of any kind, or by indirect advertisement, or by furnishing or inspiring newspaper or magazine comments concerning cases in which the physician has been or is concerned. All other like self-laudations defy the traditions and lower the tone of any profession and so are intolerable. The most worthy and effective advertisement possible, even for a young physician, and especially with his brother physicians, is the establishment of a well-earned reputation for professional ability and fidelity. This cannot be forced, but must be the outcome of character and conduct. The publication or circulation of ordinary simple business cards, being a matter of personal taste, or local custom, and sometimes of convenience, is not *per se* improper. As implied, it is unprofessional to disregard local customs and offend recognized ideals in publishing or circulating such cards. It is unprofessional to promote radical cures; to boast of cures and secret methods of treatment or remedies; to exhibit certificates of skill or of success in the treatment of diseases; or to employ any methods to gain the attention of the public for the purpose of obtaining patients."

A number of resolutions concerning State Medicine were offered for adoption and finally the House of Delegates passed the following:

"The American Medical Association hereby declares its opposition to all forms of 'state medicine' because of the ultimate harm that would come thereby to the public weal through such form of medical practice. 'State medicine' is hereby defined for the purpose of this resolution to be any form of medical treatment, provided, conducted, controlled or subsidized by the federal or any state government, or municipality, excepting such service as is provided by the Army, Navy, or Public Health service, and that which is necessary for the control of communicable diseases, the treatment of mental disease, the

treatment of the indigent sick, and such other services as may be approved by and administered under the direction of or by a local county medical society, and are not disapproved by the state medical society of which it is a component part."

The selection of San Francisco as the place for holding the 1923 session, while representing the majority vote of the House of Delegates, was not satisfactory to a respectable minority that preferred Atlantic City. However, as the California medical profession seems to be having a hard fight against the pseudo-medical cults, it was thought that the moral support given by the great American Medical Association in holding its next annual session on the Pacific Slope is justified.

The selection of Dr. Ray Lyman Wilbur as president of the Association meets with general approval.

DIVISION OF FEES

There is no question but that division of fees under one guise or another is practiced by a considerable number of Indiana physicians, and it is surprising how some men can ease their consciences by making the plea that they are paying for the services of assistants (the referring physician) or merely collecting fees for others. In a few instances the surgeon or specialist makes no pretence of covering up his practices and freely admits that he is paying to get business. In fact some surgeons frankly state that in order to get business they are forced to buy it by commissions. On the other hand, there are enough general physicians without moral stamina sufficient to guide them along ethical planes who unhesitatingly say that they take their patients where they can get a "rake off."

This whole subject has been argued so much that little more can be added. The division of fees in any guise is a species of dishonesty which should not and will not be practiced by those who desire to be conscientious as well as ethical in the practice of medicine. The general physician is entitled to just compensation for any services that are rendered, and all too frequently he is ill paid, but not once in a thousand times is any one to blame but himself because he is not adequately paid. If he will not place a proper estimate upon the value of his services he cannot expect the patients to do it for him, and it is an admission of weakness to ask the surgeon to fix fees for him. In reality much of the division of fees as ordinarily practiced is not a recognition of the value of the services rendered by the referring physician but a bribe to insure further business. We have even heard it said that there are certain physicians who give ministers twenty-five dollars for every major surgical case referred, and the

wonder to us is that the same surgeons do not have paid agents out soliciting business.

The American College of Surgeons and practically all of the state medical associations have taken a decided stand in opposition to division of fees in any form, but despite all this opposition the practice has not been wiped out, though we are satisfied that it is more limited than it was a few years ago and more largely confined to a class of physicians whose standing in good medical circles is seriously questioned. Just at the present time we are interested in an amendment to the constitution of the Kentucky State Medical Society which says that no physician may become a member of any one of the component county societies of the Kentucky State Medical Association unless he shall sign and keep inviolate the following pledge:

"I hereby promise upon my honor as a gentleman that I will not, so long as I am a member of the Kentucky State Medical Association, practice division of fees in any form; neither by collecting fees from others referring patients to me nor by permitting them to collect my fees for me; nor will I make joint fees with physicians or surgeons referring patients to me for operation or consultation; neither will I in any way, directly or indirectly, compensate anyone referring patients to me nor will I utilize any man as an assistant as a subterfuge for this purpose."

In commenting on this the bulletin of the American Medical Association says that it may be questioned if this pledge imposes any more binding obligation upon the society member than does the oath to which he is supposed to have subscribed when he became a doctor. It is doubtful if the piling up of additional pledges will have much deterrent influence on the man who will do things that are clearly wrong. In fact, the doctor who has a screw loose in his moral make-up will not be deterred from the practice of division of fees no matter how many pledges he signs. He has no hesitancy in signing and breaking a pledge, for his conscience is elastic enough to cover any breach in his ethical or moral conduct. The Indiana State Medical Association went on record as opposed to the division of fees under any guise, but we venture to say that the action taken, while crystallizing sentiment against a pernicious practice, has not been the means of stopping it, though we believe that increasing knowledge of the public concerning the matter has had a tendency to lessen appreciably the practice, and it is this latter factor which is going to solve the question eventually. When the public gets fully wise to the fact that their ills, for the most part, are being bartered to the highest bidder, with little or no respect for quality or character of the services rendered, we can depend upon it that the division of fees will come very near to being wiped out entirely.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

PHYSICIANS generally will approve the publication of a lay medical magazine by the American Medical Association. Authorization of this project was given by the House of Delegates at the St. Louis session. The object of such a magazine is to give the public dependable knowledge concerning the health and how to care for it.

THE annual dues to the American Medical Association may be reduced if in the judgment of the board of trustees such reduction is justifiable. It is very evident that such a move was contemplated when the trustees urged the adoption of a resolution by the House of Delegates giving power to change the amount of the annual dues so that they shall not be less than five dollars nor more than six dollars per annum.

IN the death of Dr. J. N. McCormack of Louisville, Ky., on May 4, the medical profession loses one of its most prominent members, and one who probably has done more for public health work and the highest ideals of medical practice than anyone in the country. He not only served his own state for a great many years in public health work but for a number of years he was actively identified with the American Medical Association in many important capacities, not the least of which was his service in traveling widely throughout the United States in establishing an approved form of medical organization. In fact it may be said that his entire life was devoted to constructive work in the interests of public health and the higher aims and objects of the medical profession.

DR. JOHN A. WYETH, the well-known surgeon in New York City, died suddenly of heart disease on May 28th at seventy-seven years of age. Dr. Wyeth was not only a noted surgeon and the author of a text book and numerous

monographs on surgery but was a conspicuous figure in the development of American medicine. He was president of the American Medical Association in 1901, and has been honored a great many times in other ways by the medical profession. Indiana physicians have cause to remember him for the notable address delivered at the first South Bend session of the Indiana State Medical Association, where he was presented with a silver loving cup in appreciation of his talents and the very warm friendship that he held for a very large number of Indiana physicians,—a friendship that continued to his death.

IN the Hygienic Laboratory of the U. S. Public Health Service, during the last three years, examination has been made of all of the lots of commercial arshpenamin and neo-arsphenamin manufactured in the United States to note deterioration. In no instance was a lot of arsphenamin encountered which could be definitely said to have deteriorated, whereas a rather large percentage of the lots of neo-arsphenamin were found to have deteriorated since their first examination. Therefore, the following conclusions have been drawn: 1. That commercial neo-arsphenamin is a relatively unstable substance in the ampule. 2. Temperature is a potent factor in causing its deterioration. 3. It is advisable to keep it under storage conditions similar to those required for vaccines, until all the factors concerned in causing the deterioration of the compound are understood.

THE new president of the American Medical Association is Dr. Ray Lyman Wilbur, president of Stanford University. At St. Louis some objection was raised to the selection of Dr. Wilbur as president in view of the fact that for several years he has not been actively engaged in the practice of medicine. However, it should be remembered that from 1899, the date of his graduation from medical school, up to 1916 he not only was engaged in active medical practice but in teaching successively physiology and medicine in the Cooper Medical College and later the medical department of Stanford University. Since 1920 he has served on the Council on Medical Education and Hospitals of the American Medical Association and has shown conspicuous administrative ability and a gift for leadership. He has shown especial interest and sympathy with the problems of the general physician.

THE Muncie session of the Indiana State Medical Association should be a very successful one. In the first place, Muncie now has a live medical profession, showing unusual progressiveness and a spirit of harmony. The meetings of the Muncie Academy of Medicine

are becoming rather famed because of their excellence and attendance from far and near. The coming session of the State Association should offer a scientific program second to nothing that has preceded it. Those who contemplate presenting papers should get in touch with the program committee at once. The final program will be published in the September number of *THE JOURNAL*. The preliminary program will appear in the August number. With our splendid Indiana roads, and now days every doctor owning an automobile, it is quite possible that a large percentage of those who attend the Muncie Session will enjoy going by automobile, though Muncie is not difficult to reach by railroad from most every section of the State.

WHEN we talk about grafts and foolish legislation we point with pride to Indiana's automobile headlight law. On the first of this year every automobile owner in Indiana was required to purchase and put on his automobile special headlight lenses. Of course these lenses cost from three to ten dollars per pair, and but a few manufacturers were able to comply with the requirements so very naturally they have enjoyed a nice income as a direct result of the law's exactions. It is barely possible that a fairly strict enforcement of the law would make us appreciate it, but, so far as we can see, there isn't a particle of effort made to see that automobiles are supplied with the required lenses or that the lights are focussed properly. In consequence we are troubled as much by glaring headlights as ever before. In fact, to the casual observer, absolutely no improvement in conditions can be noted. Thus we offer the query as to why the people of Indiana are made subjects of such fool legislation which apparently has benefited no one but the lens manufacturers.

THE *Journal of the American Medical Association* had net earnings of two hundred fifty thousand dollars during the year 1921. That is a tidy profit, but the funds are needed for carrying on the various projects inaugurated and supported by the Association. In fact, it is surprising how many activities of an exceedingly valuable nature to medical profession as well as public are carried on under the patronage of the American Medical Association. For instance, the work of the Council on Pharmacy and Chemistry in its splendid efforts for rational therapy has made its influence felt not only in this country but also broad. Then there is the educational service of the Propaganda Department which aims to investigate and expose the nostrum evil and quackery. The appropriations for special journals, and for research work in numerous investigations make the work of the Association of great value, but these various undertakings require an abundance

of money and for that reason the profit accruing from the publication of *The Journal* is necessary.

IN the ninth of a series of five-minute health talks by Dr. Hermann M. Biggs, New York, sent out by radio, tourists and camping parties are warned to guard against impure water for drinking purposes. People invariably make provisions for proper clothing, cooking utensils, good things to eat, etc., before starting on camping trips, but usually depend on getting water "any place along the way". This is not a good policy, as *safe* water is not always to be found when one wants it most. With the ever increasing number of campers, fishermen and hunters, there is a corresponding greater chance for the pollution of streams, thus rendering unsafe for drinking such surface water as found in springs, streams, ponds, etc. Attention is called to the fact that even the clear, sparkling water found in brook or spring may be polluted with the germs of typhoid. Campers are urged to get water from springs quite distant from dwellings and camps, and, when in the least doubt about the safety of the water, enough for the day should be boiled for five minutes over the camp fire, cooled in a cold stream, and kept tightly corked. Physicians would do well to speak a warning word on this subject to the laity.

ACCORDING to the report of the Committee on Legislation of the New York State Medical Society, the State of New York has less than one thousand chiropractors and about nine thousand regular practitioners of medicine who are members of the State society. The chiropractors alone spend from thirty to fifty thousand dollars a year to maintain their legislative lobby, which means a contribution from each chiropractor of from thirty to fifty dollars a year. Contrast that with seven cents a year paid by each member of the medical society of the State of New York. Practically the same state of affairs exists in every other state of the Union and exists in Indiana where the conditions are even more deplorable. It is known that the chiropractors spend several thousand dollars a year in legislative and propaganda work in Indiana, and for many years the legislative committee of the Indiana State Medical Association has spent less than one hundred dollars per year, and that merely for a little stationery, postage and telegrams while the legislature was in session. Is it any wonder that the chiropractors accomplish results? Further comment is unnecessary.

THE American Medical Association defines state medicine as "any form of medical treatment provided, conducted, controlled, or subsidized by the federal or any state government

or municipality, except such service as is provided by the Army, Navy or Public Health Service and that which is necessary for the control of communicable diseases, the treatment of mental diseases, the treatment of indigent sick and such other services as may be approved by and administered under the direction of a local county medical society and are not disapproved by the state medical society of which it is a component part." This was a compromise measure to take the place of a number of resolutions concerning state medicine that were introduced in the House of Delegates at the St. Louis session. In reality what the Association should have done was to have put itself on record as opposed to any treatment furnished or controlled by federal, state or municipal authorities which is given or offered to any but the indigent, and is in direct competition with individual practitioners of medicine. The Association might have gone a step further and put itself on record as to the reasons why opposition is offered to state medicine.

THE board of trustees of the University of Cincinnati has adopted a resolution re-affirming its purpose to establish a pay ward at its hospital and to permit surgeons of the staff of the medical college to operate private patients there and to charge for the operations. The resolution was adopted in answer to an objection raised a few months ago by a leading Cincinnati physician in an address before the members of the Cincinnati Academy of Medicine. From this we are led to believe that so far as the University of Cincinnati is concerned the wishes of the medical profession as a whole are not to be considered in framing the policies of the medical department of that institution. Our conception of a hospital in connection with the University is that it is for purely teaching purposes, and as there are enough indigent patients to more than fill the wants of the teaching force of the medical department of the University it seems unnecessary to either throw down the bars for the admission of patients able to pay or to try to increase the income and prestige of the hospital and incidentally the prestige of the members of the medical and surgical staff of the hospital by admitting pay patients.

THE narcotic drug question is receiving serious consideration in the East, particularly in New York State. That other states will have to contend with the question is a foregone conclusion, and it is well to bear in mind that there are sinister influences at work to put the narcotic drug control in the hands of commercial interests and make it possible for drug addicts to be served, while at the same time the members of the medical profession are seriously handicapped in the legitimate prescribing and

use of narcotics of any kind. The idea of committing all drug addicts to public and private hospitals or sanitaria where narcotics may be administered in any amount, without any check being placed upon the practice, is in itself a dangerous proposition, but when this sort of an arrangement is proposed in connection with the further provision that physicians be obliged to keep records for every dose of a narcotic administered, prescribed or dispensed, whether directly or indirectly, is a discrimination which is as unfair as it is iniquitous. The control of drug addiction is a difficult one to regulate, but there is no reason why the matter should be commercialized by either public or private sanitaria.

THE decision on the part of the American Medical Association to establish a central bureau for consideration of legislation is a step that should have been taken long ago. All legislative matters pertaining to medicine or the practice of medicine should receive the careful consideration of a bureau representing the entire medical profession of the United States, and this bureau should be composed of permanent members who are well qualified for the position. In reality this bureau will take the place of a paid lobby in its endeavors to acquaint congressmen and legislators with pertinent facts concerning contemplated legislation that affects the medical profession or the practice of medicine either directly or indirectly. The reason that Congress and the various state legislatures have a tendency to consider some proposed legislation that is most obnoxious and injurious to public welfare is because such proposed legislation is represented by those who are interested in it for personal and selfish reasons and heretofore but little opposition has been offered by a united medical profession. It is time for medical men to wake up and present a solid front against all forms of vicious legislation which affect the medical profession individually or collectively, or the practice of medicine.

WE never have approved the Volstead Act and always have felt that the act represented the opinion of a minority of the people of this country. However, the Volstead Act is the law of the land and even its incomplete enforcement has resulted in untold benefit to the country as a whole. Furthermore, a law to be effective must be enforced, and we have no quarrel with those who desire the enforcement of the Volstead Act in a fair and honorable way. Therefore, we look with disfavor upon the action of the House of Delegates at the St. Louis session of the American Medical Association in passing a resolution calling upon the Secretary of the Treasury and the Congress of the United States for the adoption of provisions for supplying bonded whiskey for medicinal use only at a

fixed retail price to be established by the government. In its ultimate analysis this simply means that a large number and perhaps a majority of the physicians of this country will become licensed bootleggers. The editor of THE JOURNAL does not remember ever to have refused a drink, and does not refuse one now if he can satisfy himself that what he is offered is not "moonshine", or doctored with wood alcohol, but he is distinctly opposed to the idea that whiskey is necessary for medicinal purposes, or that the privilege of prescribing whiskey for medicinal purposes can be left to the discretion of the average physician who will be tempted to prescribe whiskey as a beverage on the spurious plea that it is needed as a medicine. On the whole we believe that the action of the American Medical Association at the St. Louis session is not in keeping with the high ideals of our profession, for while the conscientious physician will not abuse any privilege accorded him in the prescribing of whiskey for medicinal use, there are countless thousands who will take advantage of the situation and become nothing better than ordinary bootleggers who purvey whiskey for a price.

AGAIN the stupendous work carried on directly and indirectly by the Rockefeller Foundation, through its departmental agencies, the International Health Board, the China Medical Board, and the Division of Medical Education, is brought to our attention through their annual report, summarized as follows:

- Continued a quarter-million annual appropriation to the School of Hygiene and Public Health of Johns Hopkins University;
- Pledged two millions to Harvard for a school of health;
- Contributed to public health training in Czechoslovakia, Brazil, and the United States;
- Aided the Pasteur Institute of Paris to recruit and train personnel;
- Promoted the cause of nurse training in America and Europe;
- Underwrote an experimental pay clinic in the Cornell Medical School;
- Formally opened a complete modern medical school and hospital in Peking;
- Assisted twenty-five other medical centers in China;
- Promised a million dollars for the medical school of Columbia University;
- Contracted to appropriate three and one half millions for the rebuilding and reorganization of the medical school and hospital of the Free University of Brussels;
- Made surveys of medical schools in Japan, China, the Philippines, Indo-China, Straits Settlements, Siam, India, Syria, and Turkey;
- Supplied American and British medical journals to 112 medical libraries on the continent;
- Supplemented the laboratory equipment and supplies of five medical schools in Central Europe;
- Defrayed the expenses of commissions from Great Britain, Belgium, Serbia, and Brazil;
- Provided 157 fellowships in hygiene, medicine, physics, and chemistry, to representatives of eighteen countries;

Continued a campaign against yellow fever in Mexico, Central and South America; Prosecuted demonstrations in the control of malaria in ten states; Co-operated in hookworm work in nineteen governmental areas; Participated in rural health demonstrations in seventy-seven American counties and in Brazil; Neared the goal of transferring to French agencies an anti-tuberculosis organization in France; Provided experts in medical education and public health for counsel and surveys in many parts of the world, and rendered sundry minor services to governments and voluntary societies.

CONCERNING the question of socializing medicine the *Ohio State Journal* has some pertinent comments concerning the uplift schemes masquerading under the term conservation, prevention, promotion, preservation, protection, correction, etc. Too frequently these movements, though unselfishly conceived and carried forward with unquestionable motives, lead to all sorts of abuses and even failures. Too frequently is medical service exploited in return for self gratification. Although medical service is being commandeered the public gains the impression that through failure on the part of the profession these spasmodic, periodic efforts in public education and treatment are necessary, whereas in many instances they are only satisfying the whims of chronic reformers and upholders. Physicians and surgeons should be praised rather than censured for giving freely of their time and service in worthy practical causes, but special public health movements, campaigns and clinics may sometimes serve as subtle propaganda for individuals, and feeders for individual practice.

"If only the vast funds and unlimited energy along these lines were used in purely educational efforts; if the public could be taught that regular, frequent and thorough medical examination are necessary, and that even apparently trivial ailments should be promptly and properly treated, thus preventing later suffering, malignancy and premature death; if the public could be educated to avoid the quack, the pretender, the incompetent; to fear and avoid self-diagnosis and self-treatment; if the inefficiency and danger of cure-alls and single-method therapy for all ailments could become common knowledge, there would be little if any excuse for the multitudinous socialized schemes for the cure of human ills.

"These statements are made with the assumption that the individual physician will recognize his obligations to his patient and to the public. As one eminent public health official recently said to the writer: 'The medical profession is not only responsive to the value of public health work as a vital and necessary effort in education and prevention but it has long advocated such principle as a duty to the public. However, we have a right to expect that if we

can educate the public to frequent physical examinations and to expect and demand competent service for medical and surgical ills rather than to rely on blatant claims of quacks and cultists; that genuine and conscientious service will be rendered. If each physician and surgeon would do his very best in each case, if he will be consistently thorough with each patient, there would be fewer followers of senseless frauds and fads.'

DEATHS

D. D. CLARK, M.D., died at his home in Decatur, May 1 at the age of 55 years. Dr. Clark graduated from the Fort Wayne College of Medicine in 1891.

JOHN F. BENHAM, M.D., died at his home in Mooresville, May 11, following a brief illness. Dr. Benham was a graduate of the Medical College of Ohio, Cincinnati.

ELI BROWN, M.D., died at his home in Throntown, May 10, at the age of seventy-six years. Dr. Brown graduated from the Eclectic Medical College of Cincinnati in 1879.

J. W. BIRCHFIELD, M.D., died at Hemlock, May 11, at the age of sixty years. Dr. Birchfield was a graduate of the Central College of Physicians and Surgeons, Indianapolis.

GEORGE W. FLEMING, M.D., died at his home in Shelbyville, May 3. Dr. Fleming graduated from the Bellevue Hospital Medical College, New York, in 1868. He was seventy-nine years of age.

CHARLES D. UMBERHINE, M.D., died at his home in Mechanicsburg, May 12. Dr. Umberhine was fifty-nine years of age. He graduated from the Rush Medical College, Chicago, in 1885, and was a member of the Indiana State Medical Association and the American Medical Association.

IRVIN O. ALLEN, M.D., of Bath, died April 27, at the age of fifty-seven years. Dr. Allen graduated from the Louisville Medical College, Kentucky, in 1898. He was a member of the Franklin County Medical Society, the Indiana State Medical Association and the American Medical Association.

MARIA JESSUP, M.D., of Fairfield, died May 5 at the age of 76 years. Dr. Jessup was a member of the Marion County Medical Society, the Indiana State Medical Association, and the American Medical Association. She graduated from Northwestern University Woman's Medical College in 1887.

C. E. MILLIGAN, M.D., Winchester, died May 4, aged 59 years. Dr. Milligan was a graduate of the Physio-Medical College of Indiana, Indianapolis, in 1890. He was a member of the Randolph County Medical Society, the Indiana State Medical Association and the American Medical Association.

M. P. DIDLAKE, M.D., of Monticello, died May 12 at the age of 78 years. Dr. Didlake graduated from the Northwestern University School of Medicine, Chicago, in 1867. He was a member of the White County Medical Society, the Indiana State Medical Association and the American Medical Association.

JAMES H. CHRISTIE, M.D., died at the home of his son in Indianapolis, May 7, at the age of seventy-three years. Dr. Christie graduated from the Cincinnati College of Medicine and Surgery in 1870. He was a member of the Jefferson County Medical Society, the Indiana State Medical Association and the American Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

THE LaPorte County Medical Society held its regular meeting at Michigan City, May 12.

DR. FAYE O. SCHENCK, of Crawfordsville, has announced his retirement from active practice.

DR. EMERY D. LUENBILL of Portland and Miss Treva Steed of Redkey were married May 8.

THE next meeting of the Seventh District Medical Society will be held in Indianapolis, October 26.

NURSES of District No. 1, State Nurses' Association, held their annual convention at Bluffton, May 13.

DR. R. R. ACRE, of Evansville, and Miss Beulah Gibson, of Indianapolis, were married at Indianapolis recently.

DR. THEODORE V. PETRANOFF has been appointed assistant surgeon at the Wabash railway hospital, Peru.

THE contract has been let for the erection of a new county hospital at Greencastle, Indiana. \$95,000 has been appropriated for the building.

THE Wabash County Medical Society held its meeting at Wabash, April 20. Papers were presented by Dr. Whisler and Dr. Walker, of Lafontaine.

THE Howard County Medical Society held its meeting at Kokomo, May 5. A paper on "Endocrines" was presented by Dr. R. E. McIndoo.

DR. C. B. THOMAS, of Plainfield, was made president of the Indiana Physico-Medical Association at the sixtieth annual convention held at Indianapolis, May 12.

CHIROPRACTORS practicing in Wisconsin cannot add the abbreviation "Dr." or "D. C." to their names as it is unlawful and in violation of the statutes.

CONGRESSIONAL action on the bill making immediately available \$12,000,000 for construction of hospitals for former service men was completed May 6th.

AT a recent meeting of the Henry County Medical Society the regular meeting date was changed from the first Friday to the second Tuesday of each month.

DR. W. D. CALVIN of Fort Wayne has been appointed councilor for the Twelfth District Medical Society to fill out the unexpired term of Dr. E. E. Morgan, deceased.

THE Madison County Medical Society held a meeting at Elwood, May 10. Papers were presented by Dr. Frank Newcomer, of Elwood, and Dr. S. W. Miley, of Anderson.

THE Kosciusko County Medical Society held its regular monthly meeting at Warsaw, April 25. A paper on "Diabetes" was presented by Dr. W. B. Siders of Warsaw.

THE Third District Medical Society met May 4 at Paoli. Papers were presented by Dr. Green, of Pekin; Dr. Horrine, of Louisville, Ky., and Dr. Gillespie of Seymour.

THE regular meeting of the Huntington County Medical Society was held at Huntington, May 5. Dr. Charles Beall of Fort Wayne presented a paper on "Intestinal Troubles."

DR. C. E. HOWARD has severed his connections with Dr. M. E. Klingler in the Clinic at Garrett, and has opened offices in San Diego, California, where he will make his future home.

THE Boone County Medical Society held its regular meeting at Lebanon, May 2. Dr. L. D. Carter, of Indianapolis, presented a paper on "Psychoanalysis and Suggestive Therapeutics."

THE Randolph County Medical Society held its meeting at the Randolph County Hospital, Winchester, May 8. A paper on "Shall We Advertise" was presented by Dr. E. G. Reynard of Union City.

DR. WARFIELD T. LONGCOPE has been appointed professor of medicine at the Johns Hopkins University Medical Department and physician-in-chief at the Johns Hopkins Hospital, beginning on July 1.

THE regular monthly meeting of the Jay County Medical Society was held at Portland, May 11. Dr. W. D. Schwartz presented a paper on "Foreign Bodies" and Dr. J. E. Nixon presented a paper on "Fractures of the Femur."

DR. GEORGE E. DE SCHWEINITZ, of Philadelphia, was elected president, and Dr. Luther C. Peter, also of Philadelphia, was elected secretary of the International Congress of Ophthalmology which met in Washington, D. C., April 25th and 26th.

THE Eleventh Indiana Councilor District Medical Society held its twenty-seventh annual meeting at Huntington, May 18. A clinic on the diseases of children was held at the Huntington County Hospital with Dr. A. C. Costello, of St. Louis, in charge.

AT the fifty-sixth annual meeting of the Indiana Institute of Homeopathy, Dr. George Lowe of Indianapolis was elected president; Dr. Frank Eikenberry of Peru, vice-president; Dr. Archie Jones of LaGrange, secretary; and Dr. J. P. Slabaugh of Nappanee, treasurer.

DR. S. D. MALOUF of Peru has gone abroad to take special work in the diseases of the kidneys and bladder. He expects to study at Paris and Rome. Dr. Malouf will return to this country about the middle of October and will then resume his practice of medicine at Peru.

PRESIDENT HARDING has transferred from the control of the U. S. Public Health Service to the U. S. Veterans' Bureau the hospitals operated by the former for the medical care and treatment of World War veterans. Fifty-seven hospitals have been turned over to the U. S. Veterans' Bureau.

THE following officers of the American Society for the Control of Cancer have been elected for the year 1922: Dr. Charles A. Powers, president; Dr. George E. Armstrong, Dr. Clement Cleveland, Dr. L. Farrand, Dr. Rudolph Mates, vice-presidents. Thomas M. Debevoise, secretary; and Dr. Calvert Brewster, treasurer.

A DECISION in the Ohio state court of appeals, which was affirmed by the state supreme court, ruled that chiropractors cannot practice in Ohio unless licensed to do so by the state medical board. The result is that chiropractors who are said to have been practicing in the state, without licenses, will be subjected to vigorous prosecution unless they secure licenses to practice.

At the forty-fourth annual congress of the American Laryngological Association, held in Washington, D. C., May 1 to 3, the following officers were elected for the ensuing year: Dr. Emil Mayer, New York, president; Dr. George Fetterolf, Philadelphia, and Dr. L. B. Lockard, Denver, vice-presidents; Dr. George M. Coates, Philadelphia, secretary, and Dr. Joseph P. Clark, Boston, treasurer.

THE Marion County Tuberculosis Hospital, located just outside of Indianapolis, has started construction on three new units, one of which is a children's building planned to accommodate forty-four juvenile patients, and two units of twenty-four beds each for adult patients. Within the next few weeks construction will be started on a large unit to be used exclusively for colored patients.

THE American Legion is conducting a campaign to raise two million dollars to establish a camp for tuberculous ex-service men at Tupper Lake in the Adirondack Mountains. Twenty buildings on a 1200 acre site already have been purchased. It is planned to have the camp advanced enough to care for 1700 men during the first year. Headquarters are at the Astor Hotel, New York City.

IN addition to the articles enumerated in the May number, the following article was accepted during April for inclusion in *New and Non-official Remedies*: Intra Products Co., Ven Sterile Solution Procaine 1 per cent. During May the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in *New and Nonofficial Remedies*: G. W. Carnrick Co.: Epinephrine-G. W. C. Co., Epinephrine Chloride Solution-G. W. C. Co.;

Intra Products Co.: Phenolsulphonephthalein-Ipc, Ven Sterile Solution Phenolsulphonephthalein; Lederle Antitoxin Laboratories: Pollen Diagnostics-Lederle; H. K. Mulford Co.: Diphtheria Toxin-Antitoxin Mixture—Mulford; National Aniline and Chemical Works: Neutral Acriflavine-Heyl, Tablets Neutral Acriflavine-Heyl, 0.1 Gm. ($1\frac{1}{2}$ grs.), Neutral Acriflavine-Heyl Throat Tablets, Neutral Acriflavine-Heyl "Pro Injectione" 0.5 Gm. vials, Neutral Acriflavine-Heyl "Pro Injectione" 1.0 Gm. vials; Winthrop Chemical Co.: Luminal Tablets $\frac{1}{4}$ grain.

UNDER the auspices of the Indiana State Board of Health and the Indianapolis Board of Health, in cooperation with all civic and community organizations of Indianapolis, the National Health Exposition Association put on an Indiana Health Exposition at the State Fair Ground, Indianapolis, May 19 to 27 inclusive. The program included motion pictures, musical numbers, pageants, demonstrations of various sorts, exhibits, and lectures and addresses by noted health workers. Dr. Frank B. Wynn served as chairman of the Educational Exhibit Committee; Dr. W. N. Wishard, chairman Pre-Exposition Sale of Tickets Committee; Dr. C. S. Woods, chairman Program Committee; Dr. Charles P. Emerson, chairman Collaborating Committee; Dr. R. E. Whitehead, chairman Speakers Committee; Mrs. Jane Teare Dahlman, Educational Director; R. E. Logsdon, Managing Director, and John A. McKeown, Associate Director. Friday, May 19, was known as Public School Day; Saturday, James Whitcomb Riley Day; Monday, Indiana Day; Tuesday afternoon, Women's Club Day; Tuesday evening, Men's Club Night; Wednesday afternoon, Doctors' and Nurses' Day; Wednesday evening, Personal Hygiene Night; Thursday afternoon, Oral Hygiene Day; Thursday evening, Civic Clubs' Night; Friday afternoon, Industrial Hygiene Day; Friday evening, Rural Health Problem Night; Saturday afternoon, Indianapolis Day; Saturday evening, Indianapolis Night.

The aim of the Exposition was the education of the public in disease prevention, and it is estimated that three hours devoted to the study of the exhibits and displays would provide the average citizen with a liberal education in how organization and government provide for the care of community health and at the same time how the individual in his daily and family life may escape disease.

Following is the registration of Indiana physicians at the St. Louis session of the American Medical Association:

Baker, Clarence S., Evansville. Baldridge, Ezra R., Terre Haute. Bannon, F. R., Kokomo. Beasley, Thos. J., Indianapolis. Bowers, H. C., Akron. Bradfield, John Logansport. Bulson, Albert E., Jr., Fort Wayne. Busard, Clifford F., South Bend. Carmack, John W., Indianapolis. Cleveland, W. R., Evansville. Clifford, J. W., Worthington. Combs, Charles N., Terre Haute. Conover, Earl, Evansville. Cummings, D. J., Brownstown. Dailey, John E., Terre Haute. Davis, William M., Worthington. Davisson, C. V., West Lafayette. Doerr, John E., Mt. Vernon. Dyer, Wallace C., Evansville. Eberwein, J. H., Indianapolis. Eckhart, G. G., Marion. Eshleman, L. H., Marion. Foreman, William H., Indianapolis. Gilliland, C. E., Terre Haute. Grandy, C. C., Fort Wayne. Grossman, W. L., North Vernon. Growan, Herman C., Hammond. Guedel, Arthur E., Indianapolis. Hade, F. L., Bridgeport. Holloway, William A., Logansport. Hoy, B. F., Syracuse. Keiper, George F., Lafayette. Larkin, Bernard J., Indianapolis. Lapenta, Vincent A., Indianapolis. Lent, E. S., South Bend. Lochry, Ralph L., Indianapolis. Lomax, Claude, Holland. Lorenz, John W., Evansville. Luckett, Luther P., Terre Haute. Lukemeyer, Louis C., Huntingburg. Mattox, Ernest L., Terre Haute. McCool, John F., Indianapolis. McClunkin, J. C., Evansville. Merritt, Frank W., Gary. Mitchell, H. F., South Bend. Mobley, R. F., Summitville. Mozingo, Arvine E., Indianapolis. Oliver, J. H., Indianapolis. Palmer, Adelbert L., Logansport. Pennington, W. E., Indianapolis. Pierce, Harold J., Terre Haute. Pierson, Allen, Spencer. Province, Clarence Franklin, Rietz, P. C., Evansville. Romberger, Floyd T., Lafayette. Rose, B. S., Evansville. Ross, David, Indianapolis. Ruddick, Hobart C., Evansville. Savery, Charles E., South Bend. Sellers, Charles A., Hartford City. Sensenich, South Bend. Schreiber, A. W., Lafayette. Tomlinson, C. H., Cicero. Ulmer, David R., Terre Haute. Viehe, Robt. W., Evansville. Voyles, C. F., Indianapolis. Walker, F. C., Indianapolis. Walters, Arthur, Indianapolis. Weinstein, Joseph H., Terre Haute. Williams, W. H., Dale. Wood, E. U., Columbus. Zimmerman, J., Lynnville. Aikman, Everett M., Indianapolis. Ball, Thomas Z., Waveland. Banister, Revel F., Indianapolis. Berry, David F., Indianapolis. Bitler, Clyde C., New Castle. Black, C. S., Warren. Bloomer, Joseph R., Rockville. Carey, Willis W., Fort Wayne. Butler, Raymond A., Beech Grove. Clark, Edmund D., Indianapolis. Clutter T. J., Mentone. Combs, P. B., Evansville. Cooper, Ernest, Plainfield. Cosby, G. O., Elizabethtown. Cottingham, J. E., Evansville. Gregor, Frank W., Indianapolis. Dees, Harry E., Evansville. DeWees, Roy E., Hartford City. Eastman, Joseph Rilus, Indianapolis. Egart, Stephen L., Indianapolis. Fleming, J. C., Elkhart. Garshwiler, William P., Indianapolis. Graham, Alois B., Indianapolis. Grayston, Wallace S., Huntington. Hatfield, S. D., Kokomo. Hatfield, Sidney J., Indianapolis. Hayden, A. M., Evansville. Jackson, Gustavus B., Indianapolis. Johnston, R. G., Huntington. Kennedy, W. H., Indianapolis. Kennedy, T. C., Indianapolis. Kitson, Frank S., North Manchester. Kruse, Edward H., Fort Wayne. Lairy, M. M., Lafayette. LeBier, Clarence R., Terre Haute. Lindenmuth, E. O., Indianapolis. Lingeman, E. L., Indianapolis. McDonald, A. C., Warsaw. McKinney, J. W., Bluffton. Malmstone, Francis A., Griffith. Marshall, Geo. D., Kokomo. Marshall, L. C., Mt. Summit. Marshall, T. J., Charlestown. Matthews, D. W., Commisskey. Metts, Fred A., Bluffton. Miller, George D., Logansport. Miller, S. T., Elkhart. Noble, Thomas B.,

Indianapolis. Osbon, Guy G., Jasonville. Overshiner, Lyman, Columbus. Padgett, Everett E., Indianapolis. Page, Lafayette, Indianapolis. Parker, Harry C., Gary. Parr, W. L., Evansville. Radcliffe, F. E., Bourbon. Ravdin, Bernard D., Evansville. Rayl, C. C., Decatur. Reed, John H., Logansport. Ricketts, J. W., Indianapolis. Roope, A. P., Columbus. Satterlee, Albert R., Crawfordsville. Schoen, P. H., New Albany. Sellers, C. A., Hartford City. Shafer, Howard O., Rochester. Smith, Geo. H., New Castle. Smoot, Dora Brooks, Washington. Sterman, George E., New Castle. Van Sweringen, Budd, Fort Wayne. Thompson, G. W., Winamac. Tomlin, Wm. S., Indianapolis. Tucker, W. M., Greencastle. Tully, Lee H., Evansville. Ward, H. H., Coalmont. Warter, Phil, Evansville. Weiss, H. G., Evansville. Welborn, James Y., Evansville. Westhafer, E. K., New Castle. Wheeler, Homer H., Indianapolis. Williams, Luther, Indianapolis. Wishard, Wm. N., Indianapolis. Woods, Charles S., Indianapolis. Zaring, Everett J., Terre Haute. Allen, H. R., Indianapolis. Bartley, Donald A., Indianapolis. Becknell, Irvin J., Goshen. Brubaker, Ora G., North Manchester. Carlson, Edward A., Peru. Catlett, Marshall B., Fort Wayne. Chappell, Ralph S., Indianapolis. Clayton, G. R., Lafayette. Clevenger, William F., Indianapolis. Collins, C. C., Roachdale. Crowder, J. R., Sullivan. Cuthbert, Fred S., Kokomo. Daniels, E. O., Marion. Dinkes, F. M., Dugger. Egbert, Robert H., Martinsville. Eby, H. W., Goshen. Emery, Charles H., Bedford. Foxworthy, Frank W., Indianapolis. Garretson, John A., Indianapolis. Gatch, W. D., Indianapolis. Gillespie, Chas. E., Seymour. Griffith, B. B., Vincennes. Hadley, James W., Frankfort. Hardesty, William L., Evansville. Hoffman, Robert V., South Bend. Holuan, J. E., Indianapolis. Hughes, William Lloyd, Indiana Harbor. Johnston, W. F., Richmond. Kearby, D. O., Indianapolis. Kiser, Edgar F., Indianapolis. Knapp, A. B., Vincennes. Kyte, E. G., Indianapolis. Langdon, Harry K., Indianapolis. Laws, Harry J., Lafayette. Lyon, Martha Brewer, South Bend. Lyon, M. W., Jr., South Bend. McCaskey, Carl H., Indianapolis. McCarthy, F. G., Terre Haute. McCown, P. E., Indianapolis. McMahon, Adah M., Lafayette. Marshall, T. J., Charlestown. Miller, Wm. H., Terre Haute. Molloy, W. J., Muncie. Morrison, Frank A., Indianapolis. Nichols, A. A., Fargo. Ottenger, Ross S., Indianapolis. Pearlman, Samuel, Lafayette. Phares, J. W., Evansville. Porter, M. F., Fort Wayne. Ravdin, M., Evansville. Repass, Robert E., Indianapolis. Ross, Louis F., Richmond. Richards, D. H., Vincennes. Ritchey, J. O., Indianapolis. Roope, A. P., Columbus. Ruddell, K. R., Indianapolis. Rupel, Ernest, Indianapolis. Sandy, Wm. J., Martinsville. Senseny, Herbert M., Fort Wayne. Schuler, R. P., Kokomo. Schweitzer, Ada E., Indianapolis. Scott, G. D., Sullivan. Shafer, Jno. W., Lafayette. Shead, Hugh B., New Carlisle. Smith, James M., Indianapolis. Smith, Lester A., Indianapolis. Sparks, A. J., South Bend. Stephenson, Richard, West Lebanon. Strange, J. W., Loogootee. Swartzel, Joseph A., Indianapolis. Taylor, W. H., Ambia. Thompson, Walter N., Sullivan. Thrasher, John R., Indianapolis. Veach, P. H., Stannton. Ward, John Paxton, Vevay. Warman, A. P., Terre Haute. Wynn, Frank B., Indianapolis. Beverland, M. E., Indianapolis. Boyd, Clandius L., Vincennes. Elliott, Harry, Brazil. Forsyth, D. H., Terre Haute. Gilham, J. H., Terre Haute. Hagie, F. E., Richmond. Jett, Frauk H., Terre Haute. Johnson, Wm. A., Perrysville. Johnston, David E., Milan. Mertz, H. O., Indianapolis. Mumford, E. B., Indianapolis. Short, John T., Fort Wayne. Wiedemann, Frank E., Terre Haute. Yeck, Charles W., Evansville.

SOCIETY PROCEEDINGS

District—Councilor	No of Counties	MEMBERSHIP CONTEST			Per- centage
		1921 Mem- berships	1922 Mem- berships	shps to date	
1st—Dr. Willis	7	176	173	173	.98
2nd—Dr. Schmadel.....	7	149	140	140	.94
3rd—Dr. Leach.....	9	130	115	115	.88
4th—Dr. Osterman.....	10	138	134	134	.97
5th—Dr. Weinstein	5	158	154	154	.97
6th—Dr. Spilman	8	159	159	159	1.06
7th—Dr. Earp	4	425	425	425	1.03
8th—Dr. Conrad	5	172	157	157	.91
9th—Dr. Moffitt	10	253	246	246	.97
10th—Dr. Shanklin	5	151	137	137	.90
11th—Dr. Black	6	191	190	190	.99
12th—Dr. W. D. Calvin	8	241	237	237	.98
13th—Dr. Berteling	8	274	253	253	.92
	92	2608	2533		

NINTH COUNCILOR DISTRICT

The annual meeting of the Ninth Councilor District of the Indiana State Medical Association was held at Crawfordsville on May 17, under the direction of Dr. A. C. Arnett, Lafayette, President, and Dr. Thos. L. Cooksey, Secretary-Treasurer. The meeting opened at 1:30 p. m. with an address of welcome by Mayor Earl Berry. Scientific papers were presented as follows: The Scope of Urology. Dr. A. M. Sullivan, South Bend; Comparative Anatomy of the Eye, Dr. George F. Keiper, Lafayette; The Occiput Posterior Position (demonstrated with lantern slides), Dr. Edward Lyman Cornell, Chicago.

The meeting closed with a banquet in the evening.

TIPPECANOE COUNTY

After a six o'clock luncheon at the Hotel Lahr Lafayette, the April 25 meeting of the Tippecanoe County Medical Society was called to order by President Ruschli. Regular Order of Business dispensed and Dr. John A. MacDonald of Indianapolis read a very concise paper on "Affections of the Mediastinum" which was illustrated by lantern slides.

Synopsis: This region has been given scant consideration compared to its importance. Affections not rare nor impossible of elicitation. Mediastinum includes all structures in chest except lungs; is divided into four parts,—superior, middle, inferior and posterior. Examination: Four cardinal symptoms: dyspnea, pain, cough and expectoration. Dyspnea most common, worst form due to glandular enlargement with pressure. Cough almost constant, but varies in form and degree. Pain, if severe, usually means plura involved. Most always present in cases of tumors and aneurysms. Expectoration, any variety may be present. Pressure symptoms vary according to location, as aphonia, hoarseness, difficult swallowing, disturbances due to pressure on pneumogastric, pressure on blood vessels producing venous stasis with cerebral symptoms. Physical signs disappointing, but may have bulging, displaced apex beat or abnormal contour. Findings on palpation and percussion not essentially different from those elicited in other chest disorders. X-ray most valuable aid in diagnosis and should be utilized. Fluoroscopy unreliable. Diagnosis made by X-ray plates along with subjective symptoms and objective findings. **Inflammation:** Acute or chronic. Acute from trauma or from other adjacent nearby infections, or localized from general septicemia. Chronic as result of carcinoma, sarcoma, leukemia, adenopathy, tuberculosis or syphilis. **Tumors:** Benign and malignant. All essentially malignant because eventually become so. Benign not common though have fibroma, lipoma, cysts. Dermoid cysts most common. Of malignant, sarcoma most common with most frequent type being lympho-sarcoma. Produce

symptoms by pressure on adjacent structures, or by pressure on nerves that control distant structures. Carcinoma, primary or secondary, has more of tendency to break down and form cavities than do sarcoma.

DISCUSSION: Dr. Lairy.—Might add the finding of thymus gland in the young which is often the cause of sudden death. Mentioned a case of this kind coincident with exophthalmic goitre.

Dr. Pyke reported case of young man aged twenty with persistent cough which X-ray examination showed aneurysm size of orange. Patient couldn't be convinced, refused treatment and passed from observation, but had been heard of going from clinic to clinic.

Dr. Arnett offered the following resolution:

WHEREAS, Effort is now being made in this community and in the surrounding communities to aid in financing the improvements in our two local hospitals; and

WHEREAS, All the funds thus collected are to be expended locally; and

WHEREAS, For the past forty years this community and the surrounding communities have depended on these local hospitals and will continue to depend upon them for their needs in accident and sickness in the future; and

WHEREAS, At this time an effort is also being made to raise funds in this community to be used in the erection of a hospital at Indianapolis known as the Riley Memorial Hospital;

THEREFORE, Be It Resolved, That this Society feels it is in duty bound to advocate aid in the cause of the local hospitals, and to urge that whatever money is being given now or at any future time, be given to aid our two local hospitals rather than to give money to an Indianapolis hospital which can never be of direct local benefit to this community.

Be It Further Resolved, That a copy of this resolution be spread upon the minutes of this Society and that a copy be sent to the Home Hospital and to the St. Elizabeth Hospital of this city.

Motion to adopt the resolution made by Dr. Levering, seconded by numerous others and unanimously carried.

At this point the minutes of the previous meeting were read and approved without change.

Dr. Allen under the State Board of Health announced that the Child's Welfare Conference would be held here May 9 and 10 at which school age children would be weighed, measured, inspected and graded; and asked for the assistance of the local physicians.

Dr. W. S. Moffitt read a paper entitled "Personal Recollections of the 'Old Time Doctor'". This paper was so entertaining and so full of historical interest, that its text was ordered to be spread upon the minutes.

Adjourned.

WM. M. RESER, Secretary.

CORRESPONDENCE

THE DOCTOR'S REST AND RECREATION

Editor THE JOURNAL:

Some time ago the advertising editor of the "Journal of the American Medical Association" wrote to a number of physicians in regard to accepting advertisements showing where the tired physician could get rest and recreation. As many of our doctors in this state go to California and Florida for rest in the winter, both of which I have visited for that purpose, I wish to suggest another and better place which is easily accessible, and gives the added pleasure of a wonderful trip on a tropical sea. This trip can be made in four weeks or longer.

Leaving Indianapolis on March 8th we were within twenty-four hours in New Orleans, leaving behind a hail, rain and windstorm, and entering into Spring already established with the flowers in bloom, and

sunshine making life worth while. On the next day we embarked on the Steamship "Zacapa" of the United Fruit Company, and for eight hours we were interested in the lovely panorama of the lower Mississippi river. This steamship line caters to the traveler's comfort in the Tropics, and with the use of the electric fan and the cold air duct you are able to keep your stateroom pleasant and comfortable even in the hottest of latitudes. Nearly three days after leaving New Orleans we entered the historic harbor of Havana. Five days in Havana was sufficient to see the sights of the place. Among the interesting places here I may mention the trip to the Casino, race track, an auto trip to the country showing the cultivation of tobacco, banana, pineapple and sugar-cane; a trip to the Toledo sugar mill where we saw the cane go in at one end and come out coarse brown sugar at the other end, ready to be sent to the United States for refinement. Other trips were made to the tropical gardens where beer was dispensed without cost for all who wished to drink, and yet no signs of any drunkenness. The remarkable thing was that there was only about a dozen people at the place, and these were all Americans. Other interesting trips included the Morro Castle, the Lighthouse, and Fort Cabanas. A river trip was made to see the national game, Jai Lai, which I think is one of the most exciting games I ever saw, at which most of the audience gamble, and which could be the most crooked of all gambling games. Facilities for shopping were most excellent and every lady in our party was delighted with the wonderful bargains in fans, perfume, toilet soap, and linens. The gentlemen were also delighted with the reasonable prices of the cigars as well as the other things to soothe and assuage a tropical thirst. Hotel prices here are high, but the cruise passengers without extra charge could remain on the boat, and if buying a ticket from port to port, a charge of two dollars (\$2) per person a day is all that is needed to sleep on the boat. Excellent meals and sea-food dinners were had in the Cafe de Paris, Cosmopolita, Dos Hermanos, and the Cafe LaFayette.

Leaving Havana on the beautiful steamship "Uluia" of the United Fruit Company, which had on it about one hundred cruise passengers from New York, we were pleased to meet a friend of our Philippine days, Dr. Richard P. Strong, Professor of Tropical Medicine at Harvard University, who was on his way to establish The Gorgas Memorial Institute of Tropical Diseases in the City of Panama. Two days and a half more along the northern coast of Cuba brought us to the beautiful harbor of Port Antonio, Jamaica, the most beautiful spot of the West Indies. The place seemed to be most delightful to Hoosier eyes. I counted nine tropical fruits cooked, uncooked, or in sherbets on the bill-of-fare at the Hotel Titchfield. This is a most ideal spot to spend some time on account of the luxuriant foliage, the lovely breeze at evening and also the wonderful starry skies, revealing several thousand stars unseen in Indiana. Starting in the morning we took a four-hour auto trip across the island to Kingston. This is a mountainous trip and the mountains are as pretty as those of Switzerland. We stopped at the Castleton Gardens, where every known tropical plant grows. Kingston is hot during the middle of the day, before the sea breeze comes. It reminds you of Suez, Cawnpore, or Hong-Kong. The perspiration oozes through your clothes, and yet as soon as you relax in the shade of the Myrtle Bank Hotel you feel refreshed, and ready for another sightseeing or shopping trip. The ladies of the party enjoyed the many colored baskets, for here the most beautiful baskets in the world are made. I was much interested in a new tropical disease called "Alastran" which though never fatal shows similar clinical symptoms to smallpox, and the sufferer is miserable for many weeks with a terrible eruption. Dr. Strong located a fatal case of hookworm disease. It was fatal on account of the treatment by Cheno-podium.

Shortly before our arrival a young girl lost her life by a large shark coming in the Kingston harbor and grabbing her while swimming. The shark was caught and put on exhibition and it certainly was a terrible creature. One of the older residents of the city said that it had been over forty years since this had occurred before. It did not seem to worry the brown boys as the natives dived every day for coins as usual.

Two and one-half days more brought us to the harbor of Christobal. It is hot in Panama and the lightest clothes are none too light, but the wonderful Hotel Washington and the cool breeze at night make life most pleasant.

Our party were guests at Fort Sherman, which is situated up in the hills. Here the breeze is strong and it is necessary to sleep with cover on you at night. In the shade you are cool at any hour of the day. A week here passed all too soon. Fishing is very good here, groupers, tarpon and amberjacks were

pulled out of the surf on the beach. Excellent fish are also found in the canal locks and along the Pacific Coast.

One day was devoted to an excursion trip to old Fort Lorenzo at the mouth of the Chagres river. This was the river the Spaniards used to bring the gold of Peru across the Isthmus and here can be seen thousands of cannon balls, hundreds of cannon and scores of dungeons.

A day at Ancon and Panama, both parts of one city, was delightfully spent in viewing the fortifications of old Panama, the wonderful cathedrals and the Ancon Hospital. It is a great pleasure to have Dr. Earheart and Dr. Clark, former Indianapolis men, to represent Indiana in such a wonderful hospital as they have there. The situation for the hospital is the most beautiful I have ever seen. Its equipment is perfect, and the results obtained there give its staff a reputation that extends from Central America down the coast of South America. It is an ideal situation for the study of tropical diseases.

The ladies agreed that this was the best place of the entire trip for Panama hats, Japanese and Chinese kimonos which were to be had at reasonable rates after much bargaining. The hotel rates at the Toivoli and the Washington at Christobal are reasonable, and the food at the government cafes is excellent and cheap.

Leaving Christobal on the "Atenas" of the United Fruit Company and in a little more than four days we were back again in New Orleans wishing we could start again and make the whole trip over. We have no regrets for making this lovely tropical trip. I am sure that any Hoosier physician would have much pleasure out of a trip of this kind more than the usual trip to California or Florida.

FRANK W. FOXWORTHY,
Indianapolis.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

IZAL.—An albuminous emulsion, containing not less than 50 per cent. of "izal oil," obtained in the destruction of bituminous coal, and consists essentially of monatomic phenols boiling between 205 and 300 C. Izal is practically free from phenol and cresols. Izal is a germicide and disinfectant. The germicidal efficiency is claimed to be twelve times as great as that of any equal quantity of phenol, but it is stated to be less toxic than phenol. The Abbott Laboratories, Chicago.

IZAL DISINFECTANT POWDER.—Izal oil, 10 per cent; naphthalene, 5 per cent; inert, absorbent earth, 85 per cent. The Abbott Laboratories, Chicago.

POWDERED PROTEIN MILK-MERRELL-SOULE.—**DRY PROTEIN MILK**.—A modified milk preparation having a relatively high protein content and a relatively low carbohydrate content. Each 100 Gm. contains approximately: protein, 38 Gm.; butter fat, 27 Gm.; free lactic acid, 3 Gm.; lactose, 24 Gm., and ash, 5 Gm. Powdered protein milk is said to be useful for correcting intestinal disorders of infants and children. For the majority of conditions, powdered protein milk should be administered in small quantities according to the age and condition of the patient, after a period of starvation of from twelve to forty-eight hours. Merrell-Soule Sales Corp., Syracuse, N. Y.

SABROMIN.—**CALBROBEN**.—**CALCIUM DIBROMBHENATE**.—Sabromin contains not less than 28.5 per cent. of bromine. Sabromin is not adapted to conditions in which a rapid saturation of the system with bromine is required. It is indicated in conditions in which the bromides cannot be administered for continued periods without gastric disturbance or in which bromism is caused readily. It is claimed that sabromin is of value in conditions in which a mild sedative action is desired, particularly in conditions requiring prolonged administration.

Dosage: from 0.3 to 1.2 Gm. Winthrop Chemical Co., Inc., New York. (*Jour. A. M. A.*, May 6, 1922, p. 1389).

Sabromin tablets, 8 grains. Winthrop Chemical Company, Inc., (*Jour. A. M. A.*, May 6, 1922, p. 1389).

IOTHION.—**IOPROPANE**.—**DI-IODO-HYDROXY-PROPANE**.—Iothion contains from 77 to 80 per cent. of iodine. It is used when it is desired to obtain the systemic effect of iodides by external application. Iothion is used in the form of iothion oil, in solution in alcohol or glycerin, or in the form of ointments containing from 5 to 20 per cent. of iothion. Winthrop Chemical Company, Inc., New York (*Jour. A. M. A.*, May 13, 1922, p. 1459).

IOTHION OIL.—Iothion, 10 parts; chloroform, 10 parts; olive oil, 80 parts. Winthrop Chemical Co., Inc., New York, (*Jour. A. M. A.*, May 13, 1922, p. 1459).

TYPHOID-PARATYPHOID VACCINE (Prophylactic) (See New and Nonofficial Remedies, 1922, p. 310).—A typhoid vaccine marketed in packages of three 1 Cc. bulbs, the first dose containing 500 million killed typhoid bacteria, 375 million killed paratyphoid A and 375 million killed paratyphoid B bacteria; the second and third doses each containing 1,000 million killed typhoid bacteria, 750 million killed paratyphoid B bacteria respectively. Parke, Davis & Co., Detroit, Mich.

PNEUMOCOCCUS VACCINE (4 TYPES) (See New and Nonofficial Remedies, 1922, p. 304).—A suspension of pneumococci, Types I, II, III and Group IV, in equal proportions, in physiologic solution of sodium chloride, preserved with cresol, 0.3 per cent. Each cubic centimeter contains 3,000 million killed bacteria. Marketed in packages of four 1 Cc. bulbs: four 1 Cc. syringes; 5 Cc. vials and 20 Cc. vials, respectively. Parke, Davis and Co., Detroit, Mich.

STREPTOCOCCUS VACCINE POLYVALENT (SCARLATINA).—A streptococcus vaccine (See New and Nonofficial Remedies, 1922, p. 308), marketed in packages of four 1 Cc. bulbs, each cubic centimeter containing 1,000 million killed streptococci isolated from scarlatina cases; also marketed in packages of 4 Cc. syringes, in 5 Cc. vials and in 20 Cc. vials. Parke, Davis and Co., Detroit, Mich.

PERTUSSIS VACCINE.—A pertussis bacillus vaccine (See New and Nonofficial Remedies, 1922, p. 303), marketed in packages of four 1 Cc. bulbs, each cubic centimeter containing 4,000 million killed pertussis bacilli (Bordet); also marketed in packages of four 1 Cc. syringes, in 5 Cc. vials and 20 Cc. vials. Parke, Davis and Co., Detroit, Mich. (*Jour. A. M. A.*, May 13, 1922, p. 1459.)

DIPHTHERIA TOXIN-ANTITOXIN MIXTURE-MULFORD.—**T. A. MIXTURE-MULFORD**.—Each Cc. of this mixture (See diphtheria antitoxin-toxin mixture, New and Nonofficial Remedies, 1922, p. 282) constitutes a single dose containing three lethal doses of toxin and 3.5 units of antitoxin. It is marketed in packages of three 1 Cc. vials; in packages of thirty 1 Cc. vials, and in packages of one 10 Cc. vial. H. K. Mulford Co., Philadelphia.

PHENOLSULPHONEPHTHALEIN-IPCO.—A brand of phenolsulphonephthalein-N.N.R. (See New and Nonofficial Remedies, 1922, p. 222). It is marketed in the form of Venetian solution phenolsulphonephthalein-Ipc 0.006 Gm. in the form of the monosodium salt. Intra Products Co., Denver. (*Jour. A. M. A.*, May 23, 1922, p. 1612.)

PROPAGANDA FOR REFORM

MORE MISBRANDED nostrums.—The following products have been the subject of prosecution by the Federal authorities charged with the enforcement of the Food and Drugs Act:

Iron Elixir (Charles S. Miller), a dilute watery solution of sodium citrate and iron chloride, with a slight trace of alcohol, sold as a cure for pimples and boils and as a blood purifier.

Vegetable Regulator (Charles S. Miller), an alkaline watery solution containing aloes and baking soda, claimed to be a remedy and cure for diseases of the liver, diseases pertaining to the stomach and bowels.

Diuretine (East India Medicine Co.), consisting of potassium acetate, buchu extract, a laxative plant drug, oil of juniper berries, sugar, alcohol and water and represented as a cure for Bright's disease and other conditions.

Bloodzone (East India Medicine Co.), consisting of extractives of plant drugs, including a laxative drug, sugar, alcohol and water and represented as a cure for syphilis, cancer, rheumatism, catarrh, boils, psoriasis, pimples and many other conditions.

Grantillas (Eneglotaria Medicine Co.), containing emodin-bearing plant extractives and cramp bark and claimed to be "the best existing uterine tonic", a first class general tonic in anemia and chlorosis and a cure for "Hysteria."

Winslow's Sarsaparilla Compound (Howard Drug and Medicine Co.), consisting essentially of extract of plant material, including sarsaparilla, potassium iodid, glycerin, alcohol and water and claimed to be a reliable remedy for scrofula, chronic ulcers, syphilitic affections, etc. (*Jour. A. M. A.*, May 6, 1922, p. 1407).

MORE MISBRANDED nostrums.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act, chiefly because the therapeutic claims made for them were unwarranted:

Compound Fluid Balmwort (The Blackburn Products Co.), consisting essentially of plant extractives, including bear-berry, a large proportion of sodium acetate, alcohol and water.

Whitlock's Child's Laxative (Whitlock Herb Medicine Co.), containing senna, Rochelle salt, sodium salicylate, soda, alcohol and water.

Whitlock's Cough Syrup (Whitlock Herb Medicine Co.), consisting of plant extractives, licorice, sugar, alcohol and water.

Whitlock's Cathartic Syrup (Whitlock Herb Medicine Co.), containing extracts of plants, including jalap, senna, fennel and peppermint, sugar, alcohol and water.

Whitlock's Nervine Pills (Whitlock Herb Medicine Co.), containing plant material, including asafetida, valerian, licorice and an ammonium compound.

Whitlock's Blood Pills (Whitlock Herb Medicine Co.), containing plant material, including red pepper, aloes, colocynth, and saffron.

Whitlock's Female Cordial (Whitlock Herb Medicine Co.), containing extracts of plants, including senna and jalap, alcohol, sugar and water.

Whitlock's Kidney and Gravel Medicine (Whitlock Herb Medicine Co.), containing volatile oils, including oil of sassafras, anise, and turpentine and alcohol.

Red Indian Liniment (Whitlock Herb Medicine Co.), containing oil of turpentine, acetic acid, ammonium chlorid, alcohol and water.

Whitlock's Worm Cordial (Whitlock Herb Medicine Co.), containing plant extractives, including spigelia and senna, glycerin, a small amount of salicylic acid, sugar, alcohol and water.

Whitlock's Nerve Pills (Whitlock Herb Medicine Co.), containing colchicin, asafetida and extract of hops.

Whitlock's Rheumatic Pills (Whitlock Herb Medicine Co.), containing colocynth, jalap and guaiac.

Whitlock's Kidney Pills (Whitlock Herb Medicine Co.), containing copaiba, extract of cubeb, a trace of oil of turpentine and magnesia. (*Jour. A. M. A.*, May 20, 1922, p. 1556.)

BOOK REVIEWS

EPIDEMIOLOGY AND PUBLIC HEALTH. A Text and Reference Book for Physicians, Medical Students and Health Workers. In Three Volumes. Vol. I. Respiratory Infections. By Victor C. Vaughan, M.D., LL.D., Chairman of the Division on Mental Sciences of the National Research Council. Assisted by Henry F. Vaughan, M.S., Dr.P.H., Commissioner of Health of the City of Detroit, and George T. Palmer, M.S., Dr.P.H., Epidemiologist for the Department of Public Health of the City of Detroit. Cloth. Price \$9. Pp. 668, with 81 illustrations. St. Louis: C. V. Mosby Company, 1922.

This book by Vaughan is, of course, one of the most important contributions to American medical literature. The preface to the work is an outline of Vaughan's own life experience in so far as it pertains to epidemic disease. This is the most interesting and possibly the most valuable part of the book. The author has taken the opportunity to elaborate and develop his own ideas concerning the pneumonias, measles, German measles, smallpox with respiratory infections. Here we find chapters on albuminal diseases, pollinosis, the acute coryzas, the pneumonias, measles, German measles, smallpox, chickenpox, diphtheria, scarlet fever, mumps, whooping cough, influenza, tuberculosis, leprosy, cerebrospinal meningitis, poliomyelitis and glanders. It is presumed that Vaughn believes that all these infections take place through the respiratory tract—some exception might be taken to this idea.

The largest chapter in the volume deals with Influenza. It is interesting to note that the author's combative measures against this disease amount to practically nothing. He states: "We do not believe that the nose and throat prophylaxis is an effective weapon against influenza"; "The only motive for closing schools would seem to be that it can be done"; "Immunization, both as a preventive and curative treatment of influenza, has been tried, but the success of these measures has not been thoroughly established." The author is exaggerating when he states that "the diphtheria bacillus seems well nigh ubiquitous." Vaughan accepts the theory that the virus of scarlet fever is not contained in the epidermal scales thrown off in desquamation and he states that scarletia is "spread chiefly through fomites."

This book will impress students with the great importance of healthy carriers in the dissemination of respiratory infections.

THE PSYCHIC HEALTH OF JESUS. By Walter E. Bundy, Ph.D., Professor of the English Bible in DePauw University. New York: The MacMillan Company, 1922.

The author is a student of New Testament literature and not a specialist in mental diseases. When he attempts to controvert the allegations of Holtzman, Rasmussen and others that Christ was an ecstatic, an epileptic or a paranoiac he wades in beyond his depth. If one were forced to form his estimate of the psychic health of Jesus on a study of this book he would be forced to conclude that it was, to say the least, questionable. The book represents a vast amount of work and it will find many interested readers, but the Reviewer cannot but wonder as to the nature of the subconscious motive which animated the author.

THE SPLEEN AND SOME OF ITS DISEASES. By Sir Berkeley Moynihan, of Leeds, England. 129 Pages with 13 full page diagrams. Philadelphia and London: W. B. Saunders Company, 1921. Cloth, \$5.00 net.

This book contains the material upon which the author based the Bradshaw Lecture delivered at the Royal College of Surgeons of England in December, 1920. Pernicious Anæmia, Leukæmia, Hodgkin's Disease, Splenic Anæmia, Hemolytic Jaundice, Gaucher's Disease, van Jaksch's Disease and Polyæthæmia are all considered with their relationships to pathological changes in the spleen and the chances of relief from surgical intervention. The author rightly states with emphasis that "instead of searching only for the existence of this or that splenic disease, an inquiry should be directed to the functional capacity of all the organs likely to be deranged." This book should be studied by both the surgeon and the internist.

THE PRACTICAL MEDICINE SERIES. Volume 11, General Surgery. Edited by Albert J. Ochsner, M.D., F.R.M.S., L.L.D., F.A.C.S., Surgeon in Chief Augustana and St. Mary's of Nazareth Hospitals; Professor of Surgery in the Medical Department of the State University of Illinois. Series 1922. Price \$2.50. Chicago: The Year Book Publishers. Ochsner's abstracts and discussions of the surgical literature are now well known and their value is widely recognized. While these books are published primarily for the general practitioner, they have a distinct value for the specialist. The reviewer knows of no book that better covers a general review of the year's surgical literature than does this one.

THE SURGICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month). Volume II Number 1 (The Philadelphia Number) 331 pages, with 145 illustrations. Per clinic year (February, 1922, to December, 1922). Paper \$12.00 net; Cloth \$16.00 net. Philadelphia and London: W. B. Saunders Company.

The Surgical Clinics of North America are still measuring up to their original high standard. The latest volume, the "Philadelphia Number", has among its contributors Deaver, Frazier, DaCosta and Muller—no abler group of surgeons is to be found in America. We strongly recommend these clinics to all those who are interested in the clinical side of surgery.

ABDOMINAL PAIN. By Prof. Dr. Norbert Ortner. Chief of the Second Medical Clinic at the University of Vienna. Authorized Translation by Wm. A. Brams, M.D., formerly Lieutenant Commander, Medical Corps, U. S. N., and Dr. Alfred P. Luger, First Assistant, Second Medical Clinic, University of Vienna. Cloth. Price \$5.00. New York: Rebman Co., 1922.

Ortner is an internist but he deals with surgical conditions in an interesting and instructive manner. He considers a number of conditions which are not usually found in American text-books. Acute deficiency of the adrenals receives attention as an important cause of diffuse abdominal pain with shock. He remarks: "A condition which may cause confusion with general peritonitis is mesoperiarteritis nodosa." The book is replete with diagnostic signs which are unfamiliar to the Reviewer. For instance: "cyanosis of the anal region is a valuable sign in the diagnosis of intussusception"; "muscular rigidity is absent in a perforation of a pyloric carcinoma"; "an early and important symptom in pneumococcic peritonitis is diarrhoea." Speaking of the differentiation between perforative peritonitis and strangulation ileus, the author says: "If the rectal temperature is two or more degrees higher than the axillary, it is an almost certain sign of peritonitis." On page 11 he states: "I wish to emphasize the point that bloody stools are practically never seen in internal incarceration and have no

connection with this type of obstruction of the small bowel"—this statement is incorrect. One reads on page 6: "A sign described by Wahl-Schlange's sign may be present," and on page 16 is mentioned "Wahl's and Schlange's signs"—the translators, of course, knew what they were writing about.

MEDICAL AND SURGICAL REPORTS OF THE EPISCOPAL HOSPITAL. Volume V. Philadelphia: Press of Wm. J. Dornan, 1920.

"The publication of this volume has been made possible by the establishment of a Publication Fund by a generous friend of the hospital, the late Miss Harriet Blanchard." These Reports of the Episcopal Hospital were not published during the war, so this is the first volume since 1916. Thirty-four authors contribute articles on a wide variety of medical and surgical subjects. But a very few of these articles have been published in current periodicals. It is interesting to note that, despite the large number of contributors, the articles of Astley P. C. Ashurst fill at least a third of the volume. This book will find a place in every medical library that is at all complete.

HUMAN HEREDITY. By Casper L. Redfield, Author of "Control of Heredity," "Dynamic Evolution," "Great Men and How They Are Produced," Etc. Issued April, 1921. Cloth, 112 pages, \$1.50. Chicago: Heredity Publishing Company, 1921.

The author does not value the teachings of either Darwin or Mendel. He believes that "powers developed by exercise in one generation are inherited by the next." He states: "In examining the pedigrees of intellectually eminent men I found that those born to fathers more than forty are more numerous than those born to fathers less than thirty." He gives an imposing list of famous men who were born to parents who were at or past middle life. The book is neither expensive nor long and can well be read by those interested in the study of heredity.

NEOPLASTIC DISEASES: A TREATISE ON TUMORS. By James Ewing, M.D., Sc.D., Professor of Pathology at Cornell University Medical College, New York City. Second Edition, Revised and Enlarged. Octavo of 1,054 pages with 514 illustrations. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, \$12.00 net.

That a second edition of a work of this kind is called for within three years from the publication of the first is at once an evidence both of its popularity and its merit.

The most extensive changes have been made in the chapters on bone tumors and neurofibromatosis. Thirty-four illustrations and twenty-eight pages have been added. New references also have been added.

No small part of the value of this work, like that of its predecessor, lies in the splendid bibliography. The book bears every evidence of being the work of a painstaking, enthusiastic, experienced man and deserves a place in the library of every man interested in the subject of tumors—and all doctors are or should be.

RADIOGRAPHY IN THE EXAMINATION OF THE LIVER, GALL-BLADDER, AND BILE DUCTS. By Byron Knox, M.D., Hon. Radiographer, King's College, London, England. Cloth. Pp. 64 with 64 Illustrations. Price \$2.50. C. V. Mosby Company, St. Louis.

Any work that aids in the differential diagnosis of lesions of the upper right abdominal quadrant is of distinct value, hence this brief resume of the anatomical considerations of the area, the pathology and chemical composition of gall-stones together with the results of an experimental investi-

(Continued on advertising p xx)



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BALTIMORE

(Continued from p 220)

gation concerning their absorption coefficients and radiographic appearance, technique of examination, the pathologic gall-bladder, record of cases and some excellent reproductions of skiagrams in illustration, offers a condensed and fruitful source of information to anyone interested in the skiography of this area.

PAPERS FROM THE MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH AND THE GRADUATE SCHOOL OF MEDICINE OF THE UNIVERSITY OF MINNESOTA, covering the period of 1915-1920. Octavo volume of 695 pages with 203 illustrations. Philadelphia and London: W. B. Saunders Company, 1921. Cloth, \$10.00 net.

Largely this volume is made up of theses presented by graduate students in pursuit of degrees. Some are based on detailed clinical studies of the material furnished by the clinic and others are research in the pre clinical medical sciences. A few papers on subjects related to those discussed by the students are also presented by the faculty. A paper by John L. Busch on Ulcers of the Gastro-Intestinal Tract with Special Reference to Gastro-Jejunal Ulcers is of great practical value to both the internist and surgeon. According to the author, the stomach is an alkali manufacturer or preserver. "A function with which it is not generally credited."

A short article by William J. Tucker on Infections of the Kidney is also very practical. The writer points out the fact that in the treatment of colon infections the keynote of conservatism while in the coccus type of infection only radical surgery suffices.

Charles C. Palmer as a result of studies on the Influence of Partial Thyroidectomy in Pigs concludes that a degree of hypothyroidism insufficient to produce physical changes, markedly lowers resistance and impairs the functions of reproduction.

David M. Berkman in "A Preoperative and Post-operative Study of Diabetic Patients with Surgical Complications" reaches the conclusion that diabetic

patients can often be relieved of disturbing and menacing conditions without undue risk by surgical procedures. In the mind of the reviewer the suggestion in this conclusion is timely in that he feels certain that many diabetics have in the past been doomed to suffering and in some cases premature death for want of surgical interference.

A most excellent paper is that by Albert C. Broders on "Squamouscell Epithelioma of the Skin." The paper is based on a study of 256 cases and is profusely illustrated. Of these cases 51.17% were preceded by some blemish such as a scab, wart, ulcer, etc.

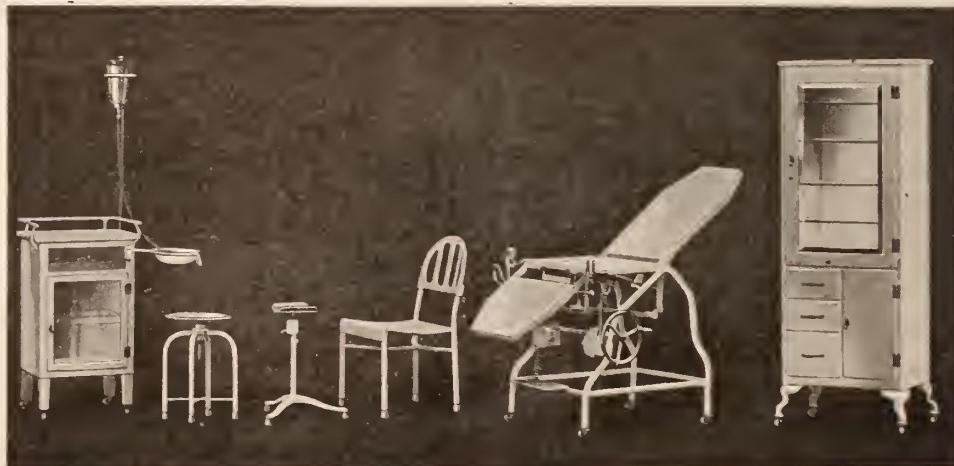
Henry W. Wolzman in his paper on "Brain Changes with Pernicious Anemia" concludes that the mental manifestations and terminal delirium in this disease are chiefly the result of the toxin.

Henry W. Meyerding concludes his short article on "Cystic and Fibrocystic Disease of the Long Bones" in part as follows: "Cysts may arise from local or general processes; Giant cells in moderate numbers, especially atypical forms, are not prognostic of malignancy; curetting and crushing in of the diseased wall is usually sufficient surgery; The microscopic picture is clear and should not be confounded with malignancy; The roentgenograph is fairly diagnostic but the history, clinical findings, examination of the patient and laboratory and roentgenographic reports should be included in making the diagnosis."

Irene Sandiford, in speaking on clinical metabolism, expresses the opinion contrary to Goetsch that the reaction after injection of adrenalin is "not indicative of the presence or absence of hyperthyroidism", but that the metabolic rate is the "only accurate index of the degree of hyperthyroidism and of the effect of either medical or surgical treatment of such cases."

A long paper by Lee W. Barry on "The Effects of Iuanition in the pregnant Albino Rat" is especially interesting now that child welfare, birth control, eugenics and similar questions are so much in the limelight.

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Owned, Published and Controlled by the Indiana State Medical Association

ISSUED MONTHLY under the Direction of the Council

Volume XV
Number 7

FORT WAYNE, IND. JULY 15, 1922

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CONTENTS

ORIGINAL ARTICLES	Page	MISCELLANEOUS	Page
Abdominal Trauma. W. U. Kennedy, Newcastle....	221	News Notes and Personals.....	246
Sterility in the Female. G. B. Jackson, Indianapolis.....	224	Councilors' Membership Contest.....	249
Some Aspects of Recent Surgical Progress. William E. Gabe, Indianapolis.....	229	Knox County.....	249
A Case of Bezzold's Mastoiditis Preceded by Thirty Years of Middle Ear Suppuration. C. Norman Howard, Warsaw.....	232	THE TRUTH ABOUT MEDICINES	249
Shall We Advertise? E. G. Reynard, Union City....	235	New and Nonofficial Remedies.....	249
EDITORIALS			
The Jekyll-Hyde Attitude of the Public Press Concerning Medical Progress and Public Health	239	Propaganda for Reform.....	249
"Underweight" a Delusion.....	240	DIRECTORIES	
Prostituting the Church in the Interests of Quackery.....	241	Indiana State Medical Association:	
Unethical Newspaper Advertising.....	242	Officers for 1922, Delegates to the American Medical Association, Councilors.....	Adv. p. 2
Editorial Notes.....	243	Committees for 1921-1922.....	Adv. p. 8
		County Medical Society Directory.....	Adv. p. 6
		District Medical Society Directory.....	Adv. p. 22
		Physicians' Directory.....	Adv. p. 25

Next Annual Session, Muncie, September 27, 28, 29, 1922. List of Officers and Committees on Adv. Page 2. Entered as Second Class Matter, January 20, 1908, at the Postoffice at Fort Wayne, Indiana, under Act of Congress of March 3, 1879. Accepted for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized October 18, 1918.

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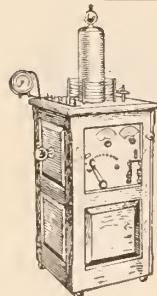
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THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF INDIANA

ISSUED MONTHLY under Direction of the Council

ALBERT E. BULSON, Jr., B.S., M.D., Editor and Manager

OFFICE OF PUBLICATION: 406 West Berry Street, FORT WAYNE, INDIANA

VOLUME XV

JULY 15, 1922

NUMBER 7

ORIGINAL ARTICLES

ABDOMINAL TRAUMA*

W. U. KENNEDY, M.D.
NEW CASTLE

The occurrence of traumatism to the abdominal wall without its perforation may and does cause injury to the contained viscera, varying in type with the severity and mode of application of the trauma. The principal type of such trauma is laceration of viscera, with the sequela of hemorrhage and peritonitis. Shock is the primary symptom, intensified by location of the injury above the umbilicus and by the volume of bleeding.

The diagnosis of visceral rupture, with its resultant indication for immediate laparotomy is ordinarily evident or will make itself evident by sepsis beginning in a few hours.

The treatment of such an injury by cleansing out the cavity, repair of injury and drainage needs no comment. It is proper to emphasize the necessity of regarding every considerable abdominal trauma as potentially mortal and wherever doubt arises, or with deepening shock or the beginning of sepsis, to give the patient the benefit of an exploratory laparotomy, the mortality of perforation or lacerating wounds increasing hourly at an appalling ratio.

The writer has observed a different type of traumatic peritonitis, of which there are no descriptions in the literature and which he believes to have been hitherto classed with the exudative peritonitis of sepsis. In a certain though low per centage of abdominal traumatic injuries the patient will quickly recover from the shock, there will be no evidence of sepsis, the pulse rate decreases, neither the red count nor the hemoglobin will decrease, the distension and pain lessen, dullness will not occur, and the whole picture shows amelioration, except that rigidity of the abdomen will persist and a subacute nausea remains. It may be summed up by saying that recovery from the acute symptoms has progressed to the point wherein one feels assurance of safety, but here that recovery halts, and after

a more or less prolonged period and generally in a slowly progressive manner, the symptoms of nausea, abdominal rigidity and constipation increase until the picture is either that of acute obstruction or that of toxemia from absorption.

The gross pathologic changes found in these cases is that of an exudative peritonitis with agglutination of intestinal coils producing obstruction either (1) by constriction (by fibrous contraction involving the outer layer of the gut wall only); (2) by acute angulation; (3) loop obstruction by band; (4) mesenteric twist by a relatively heavy mass of adherent gut, aided possibly by fecal contents, turned on its axis by pressure of efferent distended gut; or (5) such a mass falling over another coil as a result of its weight and loss of peristalsis.

In the more acute type of this form of peritonitic adhesion, the serosal adherence is general, the intestine being uniformly and completely invested with a smooth exudate much as though glue had been poured into the cavity.

In the subacute and more chronic type, the adherence while relatively general, is accentuated by the formation of few or many distinct masses, some of which attain such size as to be palpable through the abdominal wall.

In these cases one observes neither adherence of omentum to gut nor adherence to the abdominal wall as is found in septic peritonitis, nor does the exudate break down into homogenous denucleated flakes, nor does the epithelium swell and break down as in sepsis.

This type rather closely corresponds to the acute hemorrhagic form of peritonitis, for at intervals may occur the brownish black dots which, according to Adami, are the result of chemical interaction of the sulphuretted hydrogen of the gut and the iron of blood pigment. But there are not the irregular laminations, nor the evidence of petechial patches, nor the irregular deposit of more or less disorganized clots, nor the deposit of lime salts, nor the early and wide formation of new capillaries. It is clearly differentiated from the chronic hyperplastic peritonitis in that hyalin degeneration does not occur or at least has not been seen after many months.

The sequence of pathologic changes seems to

* Presented before the General Meeting of the Indiana State Medical Association, Indianapolis session, September, 1921.

depend upon injury to the vasomotor mechanism through disturbance of the sympathetic, since there does not appear to be actual laceration of vessels and capillaries. At any event, the primary condition seems to be a congestive hyperemia of the serosa induced by vaso dilation incident to disturbance of the autonomic center. Whether or not there is effusion of leukocytes I cannot say, nor can it be absolutely certain that a low grade infection, not sufficiently virulent to set up an ascertainable septic reaction, exists, though the symptomatology negatives this and physiologic considerations do not require the presence of infection. Following the hyperemia a lymph exudate covers the serosa widely and completely except that it has not been noted on the stomach or the duodenum. The adhesions are smooth and firm, though nearly if not quite bloodless. They have a marked tendency toward radial contraction, but there has not been observed the condition known as peritonitis deformans which finally reduces the gut to a dense ball with the rest of the cavity filled with fluid.

Illustrative cases are Case 1—J. C., banker, age 45, was struck above the umbilicus by a thrown brick. He fell, in great pain and with severe shock which persisted for twenty-four hours. There was a silent abdomen, extreme abdominal rigidity, no temperature rise, little if any tympanites and no evidences of hemorrhage. He then sharply rallied and was apparently recovering without substantial injury, except a persistence of rigidity and moderate nausea. Gas came through after about twenty-four hours and later a fairly free stool. On the twenty-first day, because of steadily increasing nausea, persistent rigidity and the rather typical picture of mechanical ileus, the abdomen was opened, disclosing a widespread adherence of gut with sharp kinking by angulation in several places, so that determination of the actual place of closure was impossible. The coating of adhesions covering all the gut was smooth and fairly dense. There were no adhesions to the omentum or to the abdominal wall. The stomach was not involved nor the upper portion of the jejunum, nor was there fluid in the cavity. An attempt was made to separate the coils of gut by splitting off reflections of adhesions and filling in the gaps with omentum. After a long procedure, a fairly patent canal was obtained with a minimum amount of raw serosa. It was recognized then that adhesions would promptly re-establish. Resection of intestine was impossible and short circuit was impractical. He had complete relief for a few weeks, when the same progression of symptoms occurred and following attempt at short circuit he succumbed to a septic peritonitis. At the first operation the condition was deemed unusual, though not thought to be unique, but reflection and review of the literature impressed us with the belief that it might

have been other than a septic type of peritoneal adhesion. At the second operation the conditions were so changed that no opinion could be formed. This man's history was carefully gone into and nothing was ascertained which might have any bearing upon the production of the primary adhesions at any time prior to the trauma.

Case 2—A boilermaker had an air riveting gun discharged while pressed against his upper abdomen. A typical shock of extreme severity followed, with abdominal rigidity and nausea. Following suitable treatment, he improved so rapidly that the idea of a visceral injury was abandoned. He complained mildly of continuing nausea and abdominal rigidity persisting over some three months, at no time being entirely free from discomfort, and latterly having a progressive increase of both these symptoms and of constipation which went on to almost a starvation phase with the evidences of the toxemia of intestinal stricture. In the sixth month a section disclosed almost the precise pathology of the first case; however a number of brownish black spots were seen studding the visceral wall and resembling small ink stains. After a separation of coils Cargile membrane was wrapped about all raw surfaces and suture lines not covered by reflected adhesions or omentum. Strict search was made for evidence of laceration of bowel or disease of organs of the cavity without result. The patient improved for a time, but was again developing the same obstructive symptoms when he died of a pneumonia. A post-mortem was obtained and the viscera removed. In no place could microscopic evidence of laceration extending through the wall be found nor any area of old hemorrhage with remnants of blood clot or pigment. The adhesive membrane had apparently obliterated all but traces of the serosa and few capillaries were found. The adhesive membrane was a fibrous sheet seemingly causing radial compression.

A third and fourth cases are not reported, for while the finding were much the same, a history of previous disease was obtained and definite local evidence was present of a previous septic peritonitis. And in each of these the outstanding symptoms were of abdominal trauma with shock, nausea and rigidity, the shock subsiding and the nausea and rigidity persisting with gradual evidence of intestinal obstruction. It seems quite possible that the previous condition had nothing to do with the peritonitis found, yet they are deleted because of the past history. In one case a mass of adherent gut was removed with recovery, the patient being finally lost sight of. In the other a short circuit was done with death from exhaustion and sepsis.

Case 5 was a young soldier struck in the abdomen by a piece of H. E. The usual symptoms of shock were present. After treatment in a

shock ward, he was sent back to my base hospital. Here the persistence of nausea and rigidity drew my attention. A fluoroscope being available, considerable study was done. Previous peritoneal disease was negatived by the history. The immediate case history after the injury was necessarily sketchy, but nothing in the record indicated sepsis or hemorrhage. Barium meals disclosed a normal stomach with emptying time of four hours, a normal cap but a hazy, ill-defined shadow of barium in the small gut, movable to some degree and with marked delay in reaching the cecum, and persistent retention in the gut. The colon showed no abnormalities. A section was done for the progressive toxemia and nausea and a short circuit. He was returned to the United States within a month in good condition. No information is available as to the later course of the disease and letters to him since have been returned.

It appears then that trauma may, by its action on the sympathetic, set up a type of peritonitis, non-septic in character, relatively slow in development but capable of producing almost irretrievable damage. The diagnosis rests upon a history of abdominal trauma, with shock which is soon ameliorated, a persistent abdominal rigidity which continues after the patient should be free from symptoms, a persistent nausea, a more or less fixed doughy mass, obstinate constipation increasing in severity, a nearly silent abdomen with peristalsis abruptly terminating at a fixed place, when it can at all be elicited, and a gradual toxemia from intestinal stasis. The x-ray will show an ill-defined mass of barium in the small gut, usually somewhat movable, with definite delay in the head of the meal reaching the cecum, without the definite outline of a diverticulum and with a larger outline than a diverticulum, the colon showing no abnormality. Here parenthetically I may add that I have been impressed with the value of auscultation in this as well as other types of visceral trouble. It will reveal evidences quite equal to that gained by percussion or palpation and in this as well as other forms of obstruction, the silence is truly significant. In certain phases it is permissible to use small injections of pituitrin to emphasize blocking of peristalsis.

In the acute types an immediate laparotomy is indicated to establish the pathologic condition and to do such form of repair as will re-establish the fecal current. The widespread adhesions may be dissected loose and used to partly cover raw surfaces, supplementing these with omental flaps and Cargile membrane.

In the more chronic types a re-establishment of current would be difficult and in such instances short circuiting will be indicated and even re-section of masses of agglutinated bowel.

The possibility always exists of stretching of the adhesions and so long as obstruction does

not exist to the point of closure, a waiting policy seems best. At least in my cases so little has been possible through intervention and the extensive operation so formidable that I would if possible defer operative procedure in these chronic types.

It had been my intention to discuss at this juncture certain other abdominal conditions such as appendicitis and hernia and they were announced in the printed syllabus. They are, however, reserved for another time.

The conclusions of these observations are:

1. That abdominal trauma may set up a type of peritonitis resulting in a pure form of generalized adhesion and without demonstrable laceration of intestine.
2. That as a result of such peritonitis an agglutination of bowel may occur resulting in varied form of obstruction.
3. That such a peritonitis may occur without intervening sepsis.
4. That such a peritonitis may be clearly differentiated from the septic type or the hemorrhagic type or the chronic hyperplastic type.
5. That such a reaction may be accounted for by damage to the autonomic center.
6. That a trauma followed by persistent rigidity of the wall and continued nausea is indicative of this type of peritonitis.
7. That such a group of symptoms plus acute obstruction or the increasing toxemia of stasis necessitates exploration.
8. That unless obstructive and toxic elements are definitely present and ominous a waiting policy is advisable.
9. Finally, in medico legal cases, an abdominal trauma, with persistent symptoms as herein described, may be regarded as a causative factor for the purpose of fixing liability.

DISCUSSION

DR. W. P. WILLIAMS (Lebanon): I quite agree with the doctor's general remarks that in acute abdominal trauma we should obtain early abdominal section to be sure of the conditions inside. As to the conditions which he has described, I have never seen a case. If I have I did not know it. When we have such a case presented to us of course the question is what to do with it. Since this trauma seems to be interfering with the nerve supply of the abdominal organs, probably any major interference in a surgical way to correct angulations, adhesions, etc., would be largely meddlesome surgery, because of the fact that the nerve supply to these organs is already so traumatized that we increase the trauma by surgical interference, and we may convert the case into a septic condition.

I am sorry I have not had the opportunity of seeing a case of this sort, and yet since the outlook for the patient is so gloomy perhaps it is well that many of us have not seen these cases.

I want to congratulate the doctor upon this original observation and report of cases of this kind.

DR. W. U. KENNEDY (closing): I want to say that the precise type of case in which this occurs are those in which we do not do a simple laparotomy, as the patients are apparently getting well and everything going smoothly. It is only after weeks and months that this condition develops, and then the question arises as to the primary cause. It is to put this particular type on record that I have read this paper.

STERILITY IN THE FEMALE*

G. B. JACKSON, M.D.

INDIANAPOLIS

Sterility may be broadly defined as that condition of the organism which renders the individual incapable of reproduction, although the term is usually limited to the impossibility of conception. The condition may be primary, absolute or idiopathic on the one hand, or secondary, relative or acquired on the other, and is of about equal frequency in the two sexes, this being a point of no little importance in practice as we shall later emphasize.

The essentials for fecundity in the female are: a normal ovum and a genital tract permeable to and not inimical to the spermatozoa, and physiologically fitted as host to the fertilized ovum for its transit, its implantation and its development in normal *situ* to viability. Given these conditions, and the deposit of normal male cells upon the vulva is sufficient to produce pregnancy.

Any condition which will impair these essentials of fecundity may produce sterility, *i. e.*, sterility in the broad sense of incapacity of reproduction. Such causes, as we have already mentioned, may be "idiopathic" or "acquired".

Graves¹ has written exhaustively of idiopathic sterility, and discussing "infantilism" in this relation says:

"Fetalism, a term introduced by Alfred Hégar, relates to a faulty or arrested development in intrauterine life, and is represented by conditions of aplasia, such as the absence of the vagina, uterus, ovaries or tubes."

The futility of medicine and surgery in these cases is self-evident.

Of "infantilism" he further writes that, as the term is used, it "presupposes that the individual has been born with a full equipment of genital organs, without mechanical obstruction to fetation, but that during childhood an arrest in development takes place so that in the child-bearing age the organs retain certain characteristics of the prepubescent period."

*Presented before the General Meeting of the Indiana State Medical Association, Indianapolis session, September, 1921.

1. Graves: Textbook Gyn.

This arrest in the development may be of the genitals alone in an otherwise normal individual, or it may be a part of a general hypoplasia or arrested development.

The same author says, as to the interesting question why infantilism is more common in women than men, that "the sexual apparatus of woman is so much more complicated than that of man that the chances of hypoplasia are very much increased", and quoted Hans Bob that "In general habit, in constitution, and in general mentality woman is half-way between man and child, and hence a certain amount of infantilism may be regarded as physiologic".

From the same source we read that if the infantile or hypoplastic ovary "be examined microscopically it will be found often that most of the follicles have not developed beyond the primordial state, and that there is a marked increase in connective tissue, as manifested by the thickened albuginea". According to Kehler, this lack of development of the follicle apparatus accounts for the defective function of the ovaries on the ground of the late onset of menstruation, the frequency of amenorrhea and dysmenorrhea, of sterility and failure of sexual impulse, and vicarious menstruation.

Without discussing ovarian physiology at length, we may recall that the defect in ovulation has been explained on a mechanical basis, believing that the developing ovum either meets with too great a resistance from the thick albuginea, or has an insufficient internal fluid pressure of its own.

As for the role of the Fallopian tubes, W. A. Freund, the founder of our present knowledge of infantilism, describes the tubes of infantilism as being similar to those of the new-born in that they are "markedly twisted in a spiral form, especially at the uterine ends", and Bumm calls attention to a hypoplastic condition of the fimbriated structure. However, the infantile uterus is the most important structure in this subject and occurs in two distinct forms:

First, and very infrequent, the generally dwarfed or atrophic organ with normal proportions; second, the true type, of frequent occurrence, and presenting a narrow, short corpus with a relatively much elongated cervix and, as a rule, a marked flexion either anteriorly or posteriorly. At the point of angulation a cicatricial band has often been described, which Bumm has styled "callous stenosis" of the cervix. He is of the opinion that it is an important factor in the prevention of conception. (Graves.)

Involving, as it does, the various atresias of the tract, the vaginal defects which cause "*ciffluvium seninis*" (which cannot *per se* be considered a cause of sterility), the various toxemias and the fascinating problem—complex of heredity—surely the subject of infantilism itself

is of sufficient theoretic interest to occupy the short time allotted for this presentation.

Of far greater importance, however, from a practical standpoint, is the acquired form of sterility. It is a deplorable fact that gonorrhreal infection represents far and away the greatest causative agent in this class of cases. While statistics vary greatly as to the role of the gonococcus in this relation, we may judiciously accept the average statement of such authors as Neisser, Sanger, Findlay *et al.* that the gonococcus is active in at least 30 percent of cases. The adnexa need not be involved in order to produce sterility, for the condition may be due solely to the common endocervical gonorrhreal lesion, although the adnexal extension is the usual pathologic cause, as so often seen in secondary sterility following childbirth, abortion, or mechanical interference in a subject of gonorrhreal endocervicitis.

The mere mention of these facts impels me to digress a few moments in order to emphasize the culpability of the male as regards sterile marriages! Not only does he represent an equal part of the incidence of sterility, but he has been the infecting agent in the vast majority of gonorrhreal wives. The indictment, however, does not rest here, for we must add thereto the cases due to syphilis—a not inconsiderable proportion of unfruitful wedlock!

In Leopold's Clinic, 25 percent of puerperal sepsis is gonorrhreal. Puerperal infection of non-gonorrhreal origin may also destroy fecundity, but not with the frequency of gonorrhea, for the tubes are much less often involved, although the endometrium is more often attacked. We know little, however, of true endometritis and less of its relation to sterility, excepting the very important endocervicitis. This is a frequent result of non-gonorrhreal sepsis of the childbed and a potent and tractable cause of sterility. The condition may be readily corrected by the removal of the "plug of mucus" with gentle curettage and appropriate treatment.

Of auto-intoxication, Reynolds² says:

"My experience has not furnished me with conclusive evidence that general autointoxication from distant lesions is by itself a sufficient cause for sterility, most of the cases presenting hostilities in the secretions which required considerable local treatment, and which might have been due to other causes than biochemical alteration from disturbed health due to autointoxication; but the cumulative presumption derived from numerous cases leads me to accord much practical weight to this probability and to consider it important to eliminate all such conditions in the management of cases of sterility. This conclusion is reinforced by the experience of both experimental and commercial animal breeders that both good general condition and

proper diet are essential to fertility, in both sexes. Animal breeders are emphatic about the advantage of a glossy coat, a clear eye, animated temper, etc., in breeding animals. These correspond, of course, to good complexion, bright eye and the general results of conditions of good elimination in the human race."

This, with the proper knowledge of the physiology of the sexual life and good sex hygiene, is very important. That many sterile women know nothing of sexual feeling is a matter of general knowledge.

Among other important and generally unrecognized causes may be mentioned:

Biochemical vaginal hostility, usually of bacterial and hyperacid origin; cervical hostility, as before mentioned (inflammation with acidity and mucous plug), and the tubal conditions so carefully studied by E. Ries and Reynolds.

In this latter connection I may emphasize the importance of a careful study of the normal flora and the chemical reaction of the genital tract in order to recognize and treat the deviations from the normal. This is certainly an important part of so-called "office" or "medical" gynecology. That much of the chemico-physiologic process in fecundation is beyond our ken no one will deny, and while many of this class of cases are therefore beyond our powers of cure at the present time, a careful and painstaking study of every case should nevertheless be undertaken.

Among the other causes of acquired sterility we may mention, with brief comment: genital tuberculosis and genital tumors (and here the peculiar primary sterility of the myomatous uterus is to be remarked, standing as it does in contrast to the others which act merely by their mechanical presence or by ovarian involvement). Many constitutional diseases and also chronic poisonings by different drugs produce sterility through intoxication of the germ cell, as do also the x-ray, radium, etc. Consanguinity and racial intermingling reduce fertility, and there are also cases which go to show that there may be an individual incompatibility of the germ cells. (Napoleon and Josephine present a classical example—she having had two children by a previous husband, he having one by a later wife, though they were together sterile.)

Malpositions of the uterus are not infrequent causes of sterility, and particularly is this true of the congenital types. Acquired retroversion may also tend to prevent conception and to produce abortion.

Finally, let us not forget therapeutic sterility as noted, for example, in the tuberculous, insane, eclamptic, thyrotoxic and other subjects.

In considering the care of this condition it would appear that the cases of congenital defect, *i. e.*, infantilism and fetalism, presenting as they do an impossibility of correction, are nevertheless due to preventable causes and therefore of

2. Reynolds: A. M. A., Oct. 11, 1919.

marked sociologic interest. The writer has in mind the well-known relationship of psycho-neurotic defects (epilepsy, insanity, etc.), syphilis, alcoholism, and other chronic toxemias in the ancestry, to defective development (infantilism) in the progeny.

Naturally, the acquired forms of sterility are much more susceptible of prevention. Thus we are led to touch upon the field of moral and social matters, a field as yet almost untilled: that of genital disease prevention and the greater vista of moral and health teaching, eugenics—the great public health and educational problems.

In this connection permit me to call attention to the importance of "better obstetrics" in relation to this phase of the topic of sterility: *e. g.*, first, the influence of the prolonged pounding of a protracted second stage of labor upon the head of the child, resulting in brain injuries, psychic defects, epilepsy, etc. (when not kind enough to kill). The same is true of unskilled or extremely difficult forceps deliveries. Furthermore, and not less important, are the injuries to the mother which produce acquired displacements, erosions, etc., which when neglected in the puerperium cause sterility, as do also the childbed infections. Time does not permit a detailed discussion of obstetric care in this relation, yet we must impress the point that prenatal, parturient and postpartum treatment are in direct relation to the subject, and that "better obstetrics" should reduce these unfavorable results to a minimum.

Reynolds says: "Mistakes in the management of the marital relation are not infrequently by themselves a sufficient cause of sterility, usually by production of congestion and its results. Such mistakes in marital life are not usually perversions. They may even appear trivial, and yet if long persisted in produce important results or even changes in the organs which may demand operative treatment before pregnancy can be obtained. It is very disappointing for patients to travel, perhaps long distances, to see a specialist only to receive directions to try a change of habit and if this is unsuccessful to report again. This is a very frequent cause of sterility which the general practitioner ought really to be capable of detecting and correcting, so far as change of habit is concerned, before sending his patients away."

Following this statement he offers many helpful suggestions as to the difficulty of eliciting a history from these patients, and calls attention to the general lack of knowledge on the part of the general physician as to the injurious practices in preventing conception and the defects in cohabitation which tend to cause chronic congestion of the genitalia, and in conclusion says:

"This subject is evidently too complicated for brief discussion; but adherence to the principle

that excitation without orgasm is a frequent cause of local disturbance and consequent sterility furnishes a safe guide for questions. When any one of these or other mistakes in coitus is remedied before it has been of long continuance, the mere correction of habit, or such correction in connection with minor local treatment, frequently yields a prompt pregnancy. When, on the other hand, the congestion which results from such habits has been long persistent it has not infrequently produced changes in the prostate, deep urethra or vesicles, or in the cervical or uterine mucous membrane, and even in the ovaries, which may require long continued treatment or even an operative correction before pregnancy can be secured."

Of signal importance in our work along this line is the endocrine system. Bandler³ deals at length with this phase of the subject in his recent treatise and says in part, that menstruation is a constitutional affair associated with premenstrual phenomena, these latter being due not alone to ovulation, "but to the associated altered activities of the thyroid, the adrenals, and the pituitary gland, especially the posterior lobe". Further, that "the general symptoms of this recurring premenstrual period always show which of the endocrines is or are stimulated or inhibited, and thus the unstable member or members of the chain are disclosed".

While most of us will admit that we cannot as yet accurately define and deal with these broken links in the endocrine chain, nevertheless we can do much to determine the general classification of our cases and treat them accordingly upon a more rational basis. There is no doubt, as Bandler insists, that the majority of this class of cases, which he is pleased to term "curable", are subjects of relative uterine hypoplasia (I believe one might better say genital hypoplasia).

Now we have come to believe that the ovarian substance, the thyroid, the adrenal cortex and the anterior lobe of the hypophysis are certainly in close relation to the development and function of the genitalia, *i. e.*, a trophic relation. Furthermore, it would appear that the posterior lobe were in a close relation to dysmenorrhea, and that the placenta were in direct apposition to this pituitary activity.

Reasoning along these lines Bandler has treated this class of cases medically with good results, and rightly suggests the advisability of giving this form of therapy a thorough test before determining upon the surgical measures so often and possibly erroneously employed, viz., curettage, tracheloplasty, etc. He has published an interesting series of cases in "The Medical Clinics of North America" (II, 4) which though too small a number to permit of final conclusions, yet certainly go to show that

3. Bandler: Textbook on Endocrinics.

"gland therapy" has a place in the study and care of sterility.

Duncan⁴ has pointed out that in women "the age of marriage is the chief factor in the expectation of sterility" and that "fecundity is greater in women who have married between the ages of 20 and 24 years and decreases progressively to the menopause". He says that 95 percent of 1800 such wives bore a child within three years and "none proved sterile". While this latter statement cannot, in the face of the congenital conditions and the infections before marriage, be unreservedly accepted, nevertheless the figures suggest great possibilities along the lines of eugenics.

Omitting, for lack of time, detailed discussion of the purely mechanical and surgical considerations in treatment, I desire to mention the following points:

Proper surgical procedures for conditions of the abdominal organs should be done. They may be futile as to fecundity, but even so the pathologic condition is corrected, *e. g.*, misplacements and tumors of the uterus, cystic ovaries, salpingitis, etc. (Child⁵ has published a very encouraging report of surgical cases.) The cervix should be cared for in all cases where it shows abnormality. The treatment will vary from simple dilatation and gauze packing for 24 to 28 hours to the Schroeder operation or amputation, depending upon the condition found. Solomons⁶ believes that the cervix should be dilated in all cases of sterility.

There is at present some work being done (more or less experimental) along the lines of testing the patency of the tubes with oxygen, carbonic acid gas, or air. Artificial insemination, in cases of cervical interference, has been successful in some instances. Dickinson⁷ has recently described an improved technique for deep or tubal insemination. This presupposes potency in the male, which is just as necessary as potency in the female, and which should be established in all cases before attempting to investigate the woman's fecundity.

To summarize, we would enumerate the following points of importance:

1. The role of the male both as to his own condition and his great responsibility as a causative factor in sterility in the female.

2. The vast scope of study necessary in all cases, embracing the entire field of genital and endocrine physiology and pathology, congenital and developmental defects, systemic intoxications, and even "mistakes in the management of the marital relation".

3. The wide field of preventive care, including eugenics, moral education and "better obstetrics".

4. The prognosis in general is good in young individuals and less so with increasing age and years of fruitlessness, but every case has a right to the best possible opportunity which care and skill can afford.

DISCUSSION

DR. ORAN ARNOLD PROVINCE (Franklin): At the outset it is well to remember that in all sterility of the female we must always test the male. Having ruled out the male it is essential to enter upon the examination of the female in a systematic manner. Here we may find upon inspection a urethral caruncle, tumors of vulva, deformities of vulva, gonorrhreal warts, gonorrhreal discharge, etc., either of which might interfere with proper sexual intercourse. We next should note the condition of the vagina with reference to tumor, stenosis, vaginal malformation, or vaginismus, that latter producing dyspareunia. It is very important to test the vaginal secretions and also the cervical secretions, because as you know the spermatozoa can only live four or five hours in the acid secretions of the vagina, while in the alkaline secretions of the cervix they have been known to live from one to seven days. Oftentimes we will find a plug of mucus in the cervix that causes trouble. In noting the reaction of the secretions of the vagina and cervix we may find that there is some erosion of the surface present, and this should be corrected, either by local or operative methods. An operative procedure which many follow is the amputation of the cervix in certain conditions. Some operators claim that they get best results from amputation and that sterility is not present in those who have been operated upon as often as those who have not been. And we have those on the other side who say that amputation of the cervix is not productive of propagation.

The next thing to be considered is the efficiency of the os. It is not uncommon to find a pinhole os either externally or internally. If the os is small it is very important that it be dilated and kept dilated in order that there may be free passage of the spermatozoa into the uterus.

We next examine the uterus by bi-manual palpation and sometimes find a large, soft, boggy uterus. In other words, a condition usually termed endometritis. This may be from faulty obstetrics, or from some source of infection, as gonorrhea, or from displacement of the uterus. It is not at all uncommon to find a retroflexion of the uterus, and as you know this is productive of sterility and should be corrected. In the condition of endometritis it is very necessary to curette the uterus and in all of these curettages it is important to use strict asepsis. Otherwise we may do more harm by spreading the infection. If the uterus is retroflexed there may be noted at the point of flexion

4. Duncan: Quoted by Burrage.

5. Child: Amer. Jnl. of Ob. & Gyn., Dec., 1920.

6. Solomons: S. G. & O., Feb., 1920.

7. Dickinson: Amer. Jnl. of Ob. & Gyn., Dec., 1920.

adhesions which make it almost impossible for the spermatozoa to get by. These conditions of retroflexions of course should be treated by the proper surgical procedure—as shortening of the round ligament, or whatever method you are in the habit of using.

At this point we must bear in mind fibroid and myomatous tumors, also such deformities as the bicornate uterus, the double uterus, etc., and last we must keep in mind the infantile uterus, which I think is rather common. I have noted this condition in a few instances when I have operated upon a patient for some other condition, the history of the patient having been that she was sterile all her life.

The next thing to note is the condition of the tubes, which may be large and inflamed, as in the different types of salpingitis. The most fruitful cause of salpingitis, as you know, is gonorrhea, which causes an inflammatory condition of the tubes and adnexa, the pelvis is oftentimes a mass of adhesions, so that it is difficult to differentiate the various structures. Some maintain that these cases of salpingitis can be benefited very materially by proper surgical procedure; but my own experience with gonorrhea, when it involves the tubes and surrounding adnexa, is that it is impossible to separate and correct all these conditions so that the patient will be able to bear children.

We should also note whether patients have a constitutional disturbance, like syphilis. Unfortunately, syphilitics are fairly productive of children. We note that people who are fleshy, who are extremely adipose, are in many instances sterile. In this class of cases proper diet should be given, and at the same time it is highly recommended that we give extract of lutein, thyroid extract, or ovarian extract. Many claim exceedingly good results, especially in these adipose women who have little or no flow at the time of their periods.

I think it would be wise for all of us physicians and surgeons to bear in mind that we should report all cases of gonorrhea and syphilis to our boards of health. If we do we will lessen the sterility 30 or 40 percent by getting these cases which are too poor for private treatment under the supervision of the boards of health where they will receive proper care and treatment.

DR. O. G. PFAFF (Indianapolis): It can be truly said that sterility is a question of seed and soil. We can do practically nothing to modify the seed and can only hope to correct a deficient soil. We may hope to correct certain abnormalities which operate to prevent either ovulation, fertilization, or uterine tolerance of fetal growth.

Labhardt has investigated the connection between vaginitis and other disturbances of the pelvic organs and a very frequent coincidence

was noted. In his opinion so-called vaginitis is undoubtedly extensively dependent upon ovarian dysfunction. Gonorrhea was excluded in all of his cases as far as possible by bacteriological examinations. Among about 200 cases at his disposal there were only a few without some factor (elicited in the history or demonstrated in the examination) indicative of ovarian dysfunction in the widest sense of the term. Vaginitis was repeatedly observed in connection with sterility. It is possible that not only a direct dysfunction, but a general disturbance of polyglandular cooperation is responsible for the onset of vaginal disturbances. This relationship between ovarian and vaginal disturbances it is suggested may be due to entrance of abnormal ovarian substances into the blood, or to an abnormal increase in the blood of normal ovarian products, or to an absence in the blood of those ovarian products which are normally present. Again, any combination of these factors is also to be considered as a possible factor in a special case.

Recent investigations have established an extensive influence of the ovarian function upon the uterine mucosa under various circumstances. Vaginitis is frequently combined with hypernutrition of the endometrium. Such cases are not purely local, but must be regarded as primarily referable to some disturbance of the endocrine ovarian function resulting in a change in the blood supply of the vaginal mucosa. Sterility may readily be thus assigned in certain cases of this form of so-called endometritis and vaginitis.

Sturmdorf in referring to the study of endocrinopathic sterility states that we must begin and end with the development and function of the ovary as a link which is reciprocally dominated by every other link in the endocrine chain. The domination of the endocrines on the functional activity of the ovaries manifests itself from fetal life throughout the reproductive period to the menopause. On the other hand, he states that just as the determination of sex is decided in the ovum before fertilization, so the future sterility or fertility of the individual is frequently an ovarian preordination and is not governed by the laws of endocrinology.

Sturmdorf concludes with the statement that when we know *how*, *why* and *when* each of the internal secretions stimulates or inhibits the ovarian function, then will the endocrine treatment of sterility merge from pure empiricism into a rational practice. When all is said that can be said to-day of the endocrines in sterility, the entire subject may be epitomized as a treatment in a condition of which we know little by a means of which we know less.

Many cases of sterility are of a purely mechanical origin. The ovum may be unable to

break through the thickened inflammatory peritoneum which imprisons it, or the occluded Fallopian tube refuses to permit its passage, or the abdominal mucosa of a disordered uterus refuses to tolerate the impregnated ovum and permit its normal development.

Our efforts to be successful must be directed to the correction of such evident defects as present themselves in certain cases. Many cases are very simple—a contracted cervical canal. Here a simple dilatation under anesthesia will often result in prompt fecundation. This result I have been able to achieve in a goodly number of cases.

In one case of pelvic infection and apparent sterility I removed a right pus tube and a left large cystic ovary. I then stitched the remaining right ovary into fairly close proximity with the left tube. This patient became pregnant soon afterwards and went to full term.

As a rule I believe that very little is to be expected from opening up occluded tubes. They soon close again in spite of the best care in suturing. I have tried this in numerous cases and have so far failed.

The correction of backward displacement very frequently is followed by impregnation. Occasionally the removal of a fibroid tumor, or other neoplasm, either from the mucous or serous side has resulted in a cure of sterility.

Brun tabulates 300 cases of sterility from all causes and it is interesting to note that about one-third of these patients suffered from the effects of gonorrhea, which at least suggests the possibility of a more or less efficient prophylaxis through educational efforts.

SOME ASPECTS OF RECENT SURGICAL PROGRESS*

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In considering surgical advances of the last three years one is at once impressed by the fact that nothing new of epoch-making importance has been done, but there has been an unusual amount of benefit derived from experience which will undoubtedly be of much value in the actual practice of men who are progressive in their surgical work. By this time the worth while has been sifted from the chaff of the enormous amount of war material.

Anesthetics have played an important role. There is to be seen in the literature an increasing number of references to local anesthesia. Farr, of Minneapolis, is a foremost exponent of major operative work under local anesthesia. In almost every conceivable surgical operation he has made use of it. A special apparatus which facilitates injection, the extreme patience

and gentleness necessary for the best results, and almost complete absence of post-operative discomforts and complications make operative work under this method highly successful. Gas-oxygen anesthesia in conjunction with local anesthesia as expounded by Crile is daily having a wider range of usefulness. Its use by Crile in every phase of surgery has popularized it generally. It is, however, the experience of most men that its use in the upper abdomen is decidedly limited, except possibly in the operation of gastro-enterostomy where much of the work is done outside of the abdominal cavity. The inability of securing good relaxation and the necessity of an expert for administration are its two great limitations. Stanley has pointed out a wide range of usefulness enjoyed by spinal analgesia in upper abdominal work. He reports sixty-eight cases with no difficulty in securing absolute relaxation of the abdominal walls, no shock, and scarcely any vomiting. The great value of spinal analgesia in work upon the lower extremities and in superficial operations such as hernia, and hydrocele, has long been recognized, especially for use in the aged. It is not, however, without its dangers. The synergistic action of morphine and magnesium sulphate as demonstrated at the Presbyterian Hospital in New York and described by Gwathmey, promises to give better and safer relaxation than has heretofore been obtainable, regardless of the type of anesthesia, but especially that of nitrous oxide in conjunction with oxygen.

The matter of abdominal incisions commands some interest. The war demonstrated every kind of wound of the abdominal wall that required in many instances bizarre and unusual incisions for proper work. Every man of experience in this work found no greater number of herniae following these cases and no crippling of the abdominal wall from the incision of muscle and fascia in all directions and planes. The conclusion is drawn that the old ideas of adhering closely to orthodox abdominal incisions are fallacious, and unnecessarily cramp the operator in his field. Farr has recently called attention to the trans-epigastric and trans-rectus incisions for work upon the stomach and gall-bladder—an incision widely used in the clinic at Lakeside Hospital in Cleveland. Tymmis has discussed the question of the choice of incision in acute abdominal conditions. Here undoubtedly the incision paralleling the right costal border and dividing the right rectus transversely and continuing downward parallel to the outer rectus edge is the one of choice. It easily permits general exploration, for through it the colon, pylorus, almost all of the stomach, head of the pancreas, gall-bladder, gall ducts, right kidney, duodenum, appendix and right pelvic organs can be examined and operated. It is truly the

most generally useful incision known for the abdomen.

The treatment of peritonitis has lately attracted attention because of some remarkable results obtained at Crile's clinic. His method of treatment he insists upon in a very definite and detailed way. Through his method, out of a series of 13,415 laparotomies, he has reduced his mortality in cases of acute appendicitis alone by over 67 percent. In a personal communication he recently stated that he no longer fears any but the streptococcus types of peritonitis. Briefly his method of treatment is—

(1) Adequate surgical drainage under anaesthesia.

(2) The sitting position continuously from the time the diagnosis is made through the operative and post-operative course.

(3) Vast hot packs over the entire abdomen extending from the nipples to below the groins and well to each side, maintained *hot* twenty-four hours out of the twenty-four.

(4) Assimilation by the patient of at least 4000 cc. of normal salt solution subcutaneously every twenty-four hours.

(5) Morphine hypodermically until the respirations are between 12 and 14 per minute, which rate is to be held until the patient is out of danger.

Supplementing these specific factors are others such as an accurate clean cut operation done with sharp dissection and gentle manipulation and the free use of gastric lavage post-operatively. The use of Fowler's position, heat, morphine, and fluids is nothing new in regard to the treatment of peritonitis, but used in the above prescribed specific way they almost assure the recovery of any but a streptococcus variety of peritonitis, in Crile's experience.

Work upon the origin and nature of malignant tumors has still failed to throw any light of striking importance on the subject. Ochsner has lately urged that every precaution be taken against cancer infection, although its infectiousness as yet be unproven, and has called attention to its occurrence almost exclusively in situations in the body exposed to outside irritation. Pennington's recent article summarizing old and new theories concerning cancer represents an immense amount of work. Starting with Adam's parasitic theory in 1801 he calls attention to a wide range of supposed causes as a manifestation of systemic disease and hence to be treated by mercury, hemlock, venesection, infection with malarial blood and even syphilitic blood; also rheumatism, tuberculosis, being a first-born child, thyroid overwork, high temperature of food, drinking unboiled water, alcohol, excess of salt, and so on. Some theories are genuinely amusing as when Schüler's much-talked-of golden yellow organisms proved to be cork cells from the material in which the

specimens were mounted. Pennington seriously questions whether there is an *only* cause of malignancy but believes, with Rohdenburg and Bullock, that the wide distribution of cancer in nature speaks for the possibility of its being dependent on general biologic phenomena. As Bashford points out, even the lowly oyster can harbor a genuine cancer.

Blood transfusion is daily becoming a more useful and more used surgical operation. Compatibility tests of the blood of the donor and recipient are imperative, and disregard of this step is nothing short of criminal negligence. Without doubt the citrate method attracts by far the greater number of adherents. It is easy to do technically, it requires practically no special apparatus, it does not involve the destruction of a vein in donor and recipient with the necessity of local anesthesia and a minor operative procedure—the vein is merely punctured with the needle and is not destroyed by tying off. Haste and speed are not necessary because coagulation is not to be feared. Lastly, and most important perhaps, is the ability by the citrate method to transport the blood from donor to recipient. In other methods the donor and recipient must be in the presence of one another. By the citrate method with perfect ease and safety a recipient may receive the blood from a donor 100 miles or more away. A sufficient number of investigations have shown that the amounts of citrate used are so small they play no role whatever in the chemical and clinical properties of the recipient's blood. According to Richet, Brodin, Saint-Girons, Lewisohn, Pemberton and others, harm from this method of blood transfusion is due to either a too rapid injection or a too great quantity given at one time, both of which factors would hold true in any other method. The incidence of chills following the citrate method may be somewhat greater than by other methods but the method is not accompanied by any mortality or much additional morbidity, according to the recent reports of 100 transfusions by Fleming and Porteous, 200 by Lewisohn and 1036 by Pemberton.

The subject of post-operative parotitis has attracted the attention of several writers, notably Collins and Deaver. This rather serious complication follows ordinarily abdominal operations upon the female. Prophylaxis by means of cleaning and keeping the mouth moist, hypodermoclysis, chewing paraffine, etc., often fails and infections follow. The usual treatment consists in free incisions and packing with moist gauze. This is not always satisfactory. Crile recently has found that crucial incision of the posterior capsule of the gland cures most cases. This incision is made by sense of touch entirely and is necessarily a delicate procedure because of important posterior structures that might be harmed. The resulting relief of pressure with

good drainage established rapidly terminates the inflammation.

Thyroid surgery continues to play a leading role in major operative work. As Ballin has pointed out the outstanding question concerns the *correct* treatment of the many cases of exophthalmic goitre. A patient whose thyro-toxic symptoms have developed in a goitre of some standing (the so-called secondary type) can be operated in a radical way with almost certain safety even though running a high pulse, but not so with the patient whose toxicity has developed with her goitre from its onset. Preliminary ligation is unquestionably indicated as a precursor to radical operation—a point which, as Lahey forcibly asserts, need not be drummed into the experienced operator because he has long ago learned his lesson by a disheartening mortality following primary operation. The Mayos consider a ligation not only a preparation toward radical operation but as a means of judging the patient's ability to stand further work as evidenced by their reaction to one or more ligations. Instead of ligation Ballin uses a continuous suture through the gland substance in an effort to cicatrize the tissue. He finds this usually curative and accompanied in over 200 cases by no mortality whatever. Refinements in technique have largely done away with injury to parathyroids and recurrent laryngeal nerve and with laryngeal huskiness. Lobectomy versus partial lobe resection is still a much discussed question with perhaps a preponderance of favor at present being with the adherents of the partial resection operation. It undoubtedly protects the posterior structures best, gives a better cosmetic result, and does away with the hypertrophy of the opposite side that sometimes follows lobectomy, as it must be borne in mind that in paired organs removal of one causes the other at times to undergo hypertrophy. The estimation of basal metabolic rate and the adrenalin sensitization test are both of the utmost value when correctly done. The Mayos consider the estimation of basal metabolic rate as almost a specific indicator in hyperthyroidism when fevers, diseases of the pituitary and inanition are ruled out. It is unlikely that any unanimity of opinion will ever be reached concerning the correct anesthetic indicated in thyroid surgery. Ochsner, Eastman and Lahey use local anesthesia, the Mayos straight ether, while Crile uses gas-oxygen in conjunction with local anesthesia.

In gall-bladder surgery the technique of exposure has come in for some attention. By the use of the incision spoken of earlier in this paper, the placing of a pillow under the right flank, the correct position of the operating table and the introduction of a gauze pack between liver and diaphragm as suggested by Masson, thus pushing the liver down, exposure is greatly facilitated and difficult operations upon the

ducts and gall-bladder itself are rather easily done even in the usually fat type of patient. A number of surgeons have recently emphasized the importance of a working knowledge of the rather common anatomical anomalies that exist in the relations of the gall ducts and blood vessels. Babcock has called attention to the frequency of chronic cholecystitis complicating cardiac lesions, this being the cause of the frequent symptom of "indigestion" appearing in these patients. A rapid operation with gentle manipulation reveals the gall bladder or appendix at fault, and removal relieves the patient's pain, palpitation, flatulence or eructations. Babcock advises against elaborate operation with unnecessary exploration and finds the correctly done procedure is perfectly safe in this type of case. Smithies has called attention to the fact that out of 1000 examples of gall bladder disease 93 had pathological heart conditions. The present tendency is to favor removal of the gall bladder rather than simple drainage of that organ when diseased, as statistics from many sources continue to show secondary operations necessary in the drained cases. Ochsner, however, contests this view. He leaves the organ in, sewed to the peritoneum and fascia and packs its cavity with gauze. The latter point is important, as when he drained with the tube he found secondary operations frequently necessary. Roentgenologists, through improvements in technique, are becoming more able to give accurately a positive diagnosis of existing gall stones. Undoubtedly the greatest step forward in the study of gall bladder disease of modern times is the magnesium sulphate test first suggested by Meltzer of the Rockefeller Institute and whose practical details were worked out by Lyons of Jefferson University. In this test the injection of magnesium sulphate through an Einhorn tube into the duodenum causes a relaxation of the sphincter of Oddi with a subsequent flow of bile in three distinct parts—the first from the common duct of thin syrupy consistency, the second from the gall bladder of thickropy consistency and of a dark color, and the third again of thin consistency and of light straw color from the liver itself. This test has been used innumerable times all over the country and has been found to be of great value especially in diagnosing cholecystitis and distinguishing between it and obstruction of the cystic duct. There have, however, been a number of reports from careful investigators who feel the procedure has been greatly overestimated and who even deny the ability of anyone to obtain the bile in normal cases in three distinct parts. The test may be done by anyone without special apparatus except the tube. The experience of the average clinic agrees with Crile, who found out of 33 diagnoses of cholecystitis by means of this test, 30 were confirmed by operation and out of 60 gall bladders ruled out

as normal by means of the test, only six mistakes were found at operation upon other abdominal organs subsequently. The error in diagnosis is about 10 percent. Incidentally the magnesium sulphate injection into the duodenum offers a most excellent treatment for catarrhal jaundice, according to its originator, Dr. Lyons.

Time does not allow a further account of additional important surgical advances. The magnificent progress made in chest surgery recently has not even been mentioned, nor has our gradually standardized method of nerve suture as developed by Dean Lewis. Practically everything we know of surgery of the heart is of post-war compilation as is also true of our newest methods of bone grafting. It is to be hoped that careful work and fruitful experience will teach us to be still more conservative in our daily operative work and will open further channels for the development of new ideas and progressive methods.

A CASE OF BEZOLD'S MASTOIDITIS PRECEDED BY THIRTY YEARS OF MIDDLE EAR SUPPURATION*

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On June 22, 1881, Friedrich Bezold (an otologist of Munich) in an address before a medical society in Germany, described what has come to be known as the Bezold type of mastoiditis. The following month this address appeared in *Print*. From a perusal of it one gleans the salient fact that a suppurating mastoid may elect to give way at the tip and permit a flow of pus into the soft structures of the neck. That, then, is the Bezold type of mastoiditis.

I would like you to visualize with me the tip of the mastoid, perhaps more technically called the mastoid process. On the outer surface of the tip we find the bone rather thick and covered with the tendons of the sterno-mastoid, splenius capitis and trachelomastoid muscles. While pus can go through the bone of this external surface, yet it is very difficult, and even if accomplished its journey to the neck is practically stopped by these muscle insertions. Now let us look at the inner surface of the tip. Here it is different. Here we have bone that is smooth and not so thick. The digastric fossa or groove, sometimes called the incisura, occupies a large part of this surface. It is this groove that lends itself to the attachment of the posterior belly of the digastric muscle.

Let us now consider the mechanics of such a situation. Suppose we have pus coming through the bone of the inner side of the tip. It will tend to continue its journey—because that is the

nature of pus. This particular journey is full of potential mischief. You see, the easiest way is down the neck internal to the three muscles attached to the external surface of the tip. It can go backward to the median line and it can go downward clear into the thoracic cavity.

Bezold states that the patient may recover after some months if the pus has been gotten rid of by deep incisions and drainage. In other cases there is a fatal outcome due to exhaustion, involvement of the spine, edema of the glottis or spread to the thoracic cavity. It is therefore seen that, while the Bezold type does not present the *cranial* dangers of other forms of mastoiditis, it is fraught with menace peculiar to itself. Fortunately this Bezold type is now rare. The reason for this you may have already conjectured; but I wish to emphasize this point after a description of the following case:

When patient O. B. was five years of age, diphtheria visited the family. His three sisters were very ill with it and one of them died. He passed through the ordeal with what was probably a mild attack of diphtheria, nothing being noted but a "sore throat." About this same time, history has it, a discharge of pus appeared from the left ear. This discharge has kept coming and clearing up again through a span of thirty years—he being now 35.

About two years ago the patient contracted the flu. Otherwise he has weathered along very well, except for a trying time of a year on crutches following a leg fracture. He is a successful business man, and has borne his recurring ear discomfort with the same optimism which has carried him to a high place of regard in his own city and elsewhere.

Some years ago there was a mass removed from the left external canal. Probably it was a polypoid growth, resulting from the long years of intermittent streams of pus going by, leaving the trademark of its ugly touch by the way. At those times, when the pus came through the left drum and rolled out to the pinna, it did so without ear pain, although there was an occasional slight pain below the left mastoid. Thus, for thirty years.

On November 5, 1920, something more began to happen. Pain and swelling occurred in the neck and grew worse and there were fever, loss of appetite and pain in opening the jaws. On November 10, 1920, Dr. Cripe, his home physician, and Dr. Landis, a relative, brought patient O. B. to our Clinic. He was put through routine x-ray and laboratory examinations and tests. You will be interested in the local findings. There was pus on the floor of the canal of the left ear and a granulomatous, polypoid mass in the anterior superior portion of the canal. The drum was not reddened, neither was there bulging of the posterior wall. Whisper was heard at one foot with this left ear. Left

Read before the Section on Ophthalmology and Otolaryngology of the Indiana State Medical Association, Indianapolis session, September, 1921.

side of neck was swollen. The greatest pain on pressure was two and one-half centimeters below tip of the mastoid; some pain on pressure over tip but none over antrum. That is, patient's main distress lay not in the ear and not in the mastoid, but in the soft structures of the neck.

I operated the next morning. The entire mastoid cavity was found packed with a mass of old, partially dried, cheesy, foul-smelling pus, with fresh fluid pus flowing into it from the antrum. No mastoid cells were left—simply a mass of pus from the outer to the inner shell of the mastoid bone. After this was cleaned out, an opening was found in the inner plate of the tip of the mastoid leading out into the soft tissues of the neck. A probe passed easily through this hole to two centimeters below tip. Incision and blunt dissection did not disclose any pus in the neck at that time; but later a large quantity of pus was obtained from the neck. A generous myringotomy was made in the left drum, through which came thick, creamy pus. The polypoid mass in the canal was curetted away.

It was about two months later that patient resumed charge of his business—feeling very well. But it was not until a month after that that the last tube was removed from the neck.

The tonsils, being diseased, were removed this summer.

There is still a little discharge from the external canal, and a slight amount from a small remaining opening in the mastoid, leading back to the antrum. One might feel tempted to do a radical mastoid, were it not that the patient's hearing in this affected ear is much better than it has been for years. In fact his hearing now is normal, that is, 20-20th whisper in each ear.

Frank H. Baker, pathologist for our Clinic at that time, found something out of the ordinary in the germ content of the mastoid cavity. He made elaborate tests in regard to the dominant organism. The gist of the matter was that he considered it a diphtheroid, although it was Gram negative and motile; whereas, according to Stitt, the diphtheria family, including pseudo-diphtheria commonly called diphtheroids, belong to the Gram positive non-motile variety. A culture of this organism was also sent to the Gradwohl laboratory in Chicago. The first report received from Dr. Gradwohl was that he found an irregular staining long bacillus and he was not sure of the family to which it belonged. But after the Gradwohl laboratory had made various tests, they also came to the conclusion that it belonged to the diphtheroid group. On the other hand, another good pathologist claimed that such things could not be. It would require more boldness and greater knowledge than I possess for me to enter this bacteriological discussion, but I very much hope that some bacteriologists present may take it up. Neverthe-

less, the central fact remains that there was a peculiarity about the morphology and actions of this organism, which my patient had harbored for thirty years, which marked it as something different from the rest of its kin. This brings up an interesting point which will be included in the summary of this paper.

Bezold has been quoted as saying that twenty per cent of all cases of mastoiditis are of this type. This was, of course, some years ago, Bezold having lived from 1842 to 1908. In some of the recent text-books it is mentioned as a rare or unusual condition. In trying to clear up the question of the actual latter-day percentage of occurrence, H. J. Councillor made a search for me in the Surgeon General's Library at Washington and wrote me, in part, as follows: "I have made a thorough examination of the literature indexed for the past twenty years in English, German, Italian, French and Spanish, dealing with mastoiditis, in an attempt to find something dealing with the relative frequency of the Bezold type. Although I found a number referring somewhat at length to the differential diagnosis, yet in no article were definite percentages mentioned." In reply to a letter of inquiry, Dr. Joseph Beck of Chicago stated: "I am pleased to report that in my experience of twenty-five years, during which time I examined and operated on more than three thousand mastoid cases, I have just had eleven Bezold's type." That, you see, would be less than four-tenths of one per cent. The reply received from Dr. H. P. Mosher of Boston said: "One per cent or even less." Dr. Charles W. Richardson of Washington wrote me as follows: "Bezold abscess in my hands has been about one-tenth of one per cent of mastoiditis. I consider it the rarest of conditions. I have always looked upon it as a type of perforation which took place in neglected and undiagnosticated abscess of the mastoid, particularly involving the lower cells and the tip. Bezold described these conditions some thirty years ago when the mastoid operation was done as a last resort, and therefore they were more frequently observed by him at that time than they are at the present time. With the early operation now there is no time for the development in the perforation of the tip in the digastric groove."

SUMMARY

1. It is interesting to note the long period of thirty years' infection in this patient; apparently starting from a mild attack of diphtheria.

2. Given a thirty years' local lodgment of diphtheria bacilli, let us speculate: Might these diphtheria organisms gradually change their characteristics (such as staining qualities, motile possibilities, etc.) just as a group of people isolated from outside influences might gradually

diverge from the original stock? The bacteriological findings are very interesting with this thought in mind.

3. Also, consider the minor role the pus-filled mastoid played in the local subjective symptoms of the patient.

4. The post-operative gain in weight (sixteen pounds more than at any prior time), with a splendid increased feeling of well-being, is probably an expression of systemic relief from a long harbored focal infection. The marked improvement in hearing is gratifying.

5. The now rare occurrence of the Bezold type (less than one-half of one per cent of all cases of mastoiditis, as compared to twenty per cent in Bezold's time) is largely due, as Dr. Richardson said, to the earlier surgical interference in mastoiditis by the modern otologist.

DISCUSSION

DR. E. J. LENT (South Bend): This type of descending abscess readily divides itself into three groups. This division is not arbitrary, but rather conforms to the anatomical configuration of the parts and to the insertion of the muscles at the tip of the mastoid.

In one group would be included those cases which perforate the tip in the region of the sterno-mastoid where the muscular tissue is dense; the course of this type of perforation is rather slow. The determination, if early drainage is instituted, is always recovery. There is one condition characteristic of this type of Bezold's perforation, and that is that the swelling is just at the tip of the mastoid. Another characteristic is that in very many cases you cannot palpate the tip of the process at all.

In the second group would occur those perforations where the pus drains into the tissue between the muscles, following the fascial apertures. This is the most fatal type of Bezold's mastoid. In this form of perforation the pus may burrow down as far as the clavicle, even to the roof of the pleura and as far back as the cervical vertebra.

The third group includes those cases where the abscess perforates into the muscular substance of the digastric. The course of this is slow and is very difficult at times of recognition. It is characterized by deep brawny swelling of the neck far forward, sometimes reaching the arch of the pharynx. Bezold records one case of perforation in the belly of the digastric, the abscess eventually draining into the pharynx. The patient recovered.

Fortunately these abscesses do not occur very often in infants or young children, due largely to the fact that the mastoid is not developed before the third year. However, children do have subperiosteal abscesses, which are higher up; the pus making its exit through the petro-squamosal suture.

As to the treatment of these cases, it is obvious that a radical exenteration of all mastoid cells should be made. The perforation in the tip should be located and enlarged, a guide passed down into the pus chamber and counter drainage established.

In a chronic case such as the doctor has here recited, permanent safety of the patient is enhanced by a radical procedure. The fact that the patient's ear had been draining for thirty years, no matter what the type of infection, would indicate a radical operation.

DR. HARRY BOYD-SNEE (South Bend): I have listened to Dr. Howard's paper with much interest, but I cannot accept it as covering the whole subject of the complication which is designated Bezold's type of mastoiditis. I must inject into this discussion consideration of the petrosa as a structure which can harbor the primary focus of infection in association with mastoid involvement; or it can exist quite disassociated from the mastoid structure. I have observed this complication in direct connection with the primary focus located in the petrous portion of the bone, and the connecting tract was found in an erosion in the wall of an infected terminal petrosal cell situated deep and beyond the mastoid; I have also noted it as a post operative complication in a case in which complete mastoid exenteration and complete tip and digastric plate resection had been done, and the direct connection was found in an erosion in the jugular plate of the petrosa. With this knowledge the operator who encounters Bezold's complication without any manifest defect in the digastric plate, will not hesitate to penetrate and explore the petrous portion.

DR. CARL MARION SAUTTER (New York City): Concerning the Bezold type of mastoid, I have had a few cases, and as I remember, most of them were due to a virulent type of infection. Two cases occurred where there was chronic suppuration and a radical mastoid was performed at once.

One case that I particularly remember that gave me considerable trouble, was the third type pneumococcus infection. That is an infection and organism that will cause more destruction and more breaking through of bone than any other type, and will do so very quickly sometimes. This infection was formerly known as the capsulatas streptococcus, but this is generally conceded now to be a misnomer.

Concerning diphtheroid infection I cannot say much about that, but we do know that we get all kinds of infections in the mastoid. We even have the Vincent's spirillum, but these infections are more apt to be benign.

As one of the speakers has said, I believe it is quite true that the Bezold type is found less often than it was formerly, because of the early

diagnosis and the early operative interference in the mastoid.

DR. JOHN F. BARNHILL (Indianapolis): Bezold's type of mastoid abscess is, in my experience, not so frequently met with as reported by Bezold, nor so rare as quoted in the experience of Beck and Richardson. There can be little question but that the disease is less common now than twenty years ago when I saw and operated many cases. However, judging by the number I have seen and continue to see, I could not agree that the affection should be regarded a rare one.

While Bezold's abscess is always a late manifestation of mastoiditis, I have never known of a case occurring as late as thirty years. Indeed I have never witnessed its occurrence in a chronic case. It occurs usually from two weeks to two months after the onset of the mastoiditis, and depends largely upon the severity of the disease and the character of the mastoid cells. It happens only in cases where the cells are large at the mastoid tip and the bony cortex thin toward the diaphragmatic fossa. When the cortex is thin above the attachment of muscles to the mastoid tip the perforation of bone takes place behind the ear and the pus travels upward, doubles the ear forward and produces the well known post-aural abscess. When the perforation is into the diaphragmatic fossa the pus travels downward along the carotid sheath; there is hardening of the structures of the neck below the ear, the neck is stiff and painful to pressure, but the mastoid region itself usually remains normal in every way. Bezold's abscess is an example of surgical neglect. It would rarely occur if mastoiditis is early diagnosed and early operated.

DR. C. NORMAN HOWARD (closing): One would naturally think of the advisability of doing a radical mastoid. My reason for not doing it was that at the time it was an acute condition. I was anxious to do for this man the immediate necessary things, and if possible to get him through with no lessening of his hearing, or with perhaps an improvement. This we accomplished and his hearing is now perfect with that ear.

Of course we have not been idle from the medical standpoint: ringing the changes on various local antiseptics. His tonsils showed a possibility of making trouble, and we took them out. In other words, what I am trying to do with that man is to save his hearing, and if it comes to pass that other symptoms develop, we will probably have to do something further in order to save his life.

SHALL WE ADVERTISE?*

E. G. REYNARD, M.D.
Union City, Ind.

In presenting a paper on this subject, I do so believing we can well afford to rest from the usual scientific papers read and discussed at these meetings, and consider some of the principles of the profession which are now being endangered, but which have prevailed since the introduction of medicine.

While this is not strictly a scientific subject, yet it is an allied one and one that should be close to the heart of every member of the medical profession. There are few problems confronting the profession today of more interest or possessed of more grave results, than the tendency to resort to or accept that most flagrant of all abuses "advertising". There exist in every community men whose intellects have not been quickened or their consciences impressed with the importance of ethics. On the contrary the commercial microbe has been sown and multiplied in the gray matter of their exaggerated ego until they are willing to commercialize their profession and trail under their dirty feet the principles on which the success of their profession has depended.

In talking to different members of this Society about a paper on this subject, I have had various suggestions offered. One says, "Make it raw"; another says, "They all advertise in some way; handle it judiciously". If "making it raw" means to use a hammer, or embarrass the guilty, if any there may be,—allow me to say that such is not my object; or if handling it judiciously means to handle it with gloves on and harmonize with or apologize for the guilty, I cannot be judicious to such a point. My object is to speak on this subject in a general way and consider its effects on the profession as a whole. I shall not regard the feelings of the little, selfish, narrow minded violator of our time-honored customs who tries to advertise himself and not methods, for by his conduct he has divorced himself from the profession and should have no consideration in the affairs of physicians; but what I wish to do is to send out the S. O. S. call to those of the profession who are inclined to sit by with a passive indifference and permit these irregular 2½ percent or near professionals to "rock the boat" of professional success.

From the beginning of medicine the profession has been controlled by a so-called code of ethics. One of the unwritten laws of that code is that physicians shall not advertise, and that no ethical physician would advertise in any way. In the rules governing the profession

*Read before the Randolph County Medical Association, May 8th, 1922, and referred for publication in The Journal.

it has also been a written law that advertising was irregular and unprofessional. This applied to all of the allied branches of the profession, county, state, and national associations have legislated against it, and faculties in medical institutions have taught us a refrain from it. Boards of examination and registration have implied in our permits to practice medicine an agreement not to advertise. Physicians admitted under reciprocity are required to sign a contract not to advertise. Osteopaths, chiropractors and others applying for permission to practice are required to sign the same contract. The object has been to teach that the profession of medicine is a profession and not a business, and that any attempt to commercialize it was regarded unprofessional and a violation of the controlling code. We have built upon a foundation which has been strong,—strong enough to guide us in the confidence of the people at peace with one another, and respected by mankind in general; but indications now are that the foundations upon which we have built is tilting, and that the pendulum which marks the conditions that exist is swinging far from center. We are taking into our societies under the guise of full membership and good fellowship too many physicians who have no regard for ethics. They are too prone to ignore the admonitions of the past, and resort to the newspapers and other methods of getting their names before the people. Medical journals have printed articles expressing very liberal views on this subject, and we have accepted them with a passive indifference until at the present time advertising is accepted as almost legitimate.

When a young man begins casting about to decide on a business or profession to which he expects to dedicate his life's service, one of the first things he should consider is the rules and regulations governing that particular profession, and if he cannot enter that profession and conduct himself in harmony with the laws of the organization, he should not ask to be created one of them; and if created one and proves false to its requirements, he should not be continued as one. A member of any organization attempting in some irregular way to further his own position at the expense of others engaged in the same work, does that organization harm. No man should expect or demand the co-operation or protection of an organization when he is false to its laws, and betrays the association by violating the very principles on which the success of that organization has depended.

There was a time when the medical profession was held in reverence and respect. Physicians were regarded as men of intelligence, education and honesty of purpose; a profession of deeds and not of words. Then their virtues and capabilities were not displayed before the

people in a spectacular way and service was rendered in a modest, dignified and honest manner. No confusion was created in the minds of the people as to what school they belonged to, who their friends were, nor what their specialty was. They were the medical advisors, and all were satisfied. But today the more confusion we can create, the more attention we can attract to ourselves, the more we can succeed in keeping our names before the public legitimately or otherwise, the more we expect in return.

We have fought members of other schools and advertised ourselves in various ways until the heretofore tranquil mind of the people has become disturbed. Doubting and suspicious, they are beginning to consider the profession a business or a trade, and that the same grasping, wrangling and deceptive methods are being resorted to as in other business avocations.

They realize that their health and body and confidence is being juggled with by the overzealous, designing and incompetent member of the profession who camouflages himself with the title of a physician and plays upon the minds of the unsuspecting public. What are its results? That we have progressed scientifically there can be no question. We know more about the human body and treatment of disease than formerly, but have we maintained our position in the respect of the public; has not our confusion and a tendency to display our self-estimated ability and importance served to confuse the people and drive them from the legitimate channel of medicine and cause them to seek relief from the near professionals? There is no place where it is so easy to impose upon the minds of the people as upon those who are sick and distressed. They are easily influenced and incapable of discriminating between the true and false, and when they see the testimonials of the christian scientist, the osteopath, the chiropractor, and your name, all appearing in the same paper with the same objects in view, what more can you expect than that the people who cannot make distinction would lose respect for one class, and form an attachment for another.

Their advertising looks as good to the people as yours, and while they may display more ignorance in their testimonials, the object of your egotistical and misleading personal reports is just as apparent and destructive to the code of ethics as theirs.

Mercantile advertising has always been accepted as legitimate. In that case they have something tangible to dispose of. A merchant may have a specially fine line of goods, or he may have shelf worn, second hand, or a smoke damaged stock, but he acquaints his patrons through the medium of the press with what he has. You can go examine his goods, take your choice and pay the price. But what have you to

advertise? Have you the audacity to advertise your ability as superior? It may be imaginary only. Have you second hand service to render? Or do you mean to say that you are a little smarter and more capable of doing all things than anyone else in your community? Professional advertising places you on a lower par than the merchant. He can display the goods he advertises, but you cannot. You can only display the man.

What is advertising? It is a method of bringing yourself or your product before the people for personal gain, in which you expect to dispose of something for which you get more in return than you give. It matters not whether you resort to the methods of the street corner vender, the local advertiser, or patent medicine man—you are all in the same class, a disgrace to the profession and false to the honors that have been conferred upon you. You are imposing upon the minds of an ignorant public under the protection of the medical association which fathers you, and the sooner we eliminate you from our societies, the better it will be for us.

If I were to ask you this question, "Shall we advertise?" I have no doubt what your answer would be. Not one of you would advocate going into the papers and conducting a paid advertisement along with the merchant or the patent medicine man, but do you advertise? There are many methods that can be resorted to. You can be spectacular in everything you do. You can attempt to play the churches, local clubs and societies. You may try to subsidize the telephone girls or report your day's business to the daily press, and put your name in a prominent position in connection with cases you come in contact with. You may report the number of cases that come to your office for treatment in a day's time or within the year; or you can secure the services of a staff correspondent and pay for an article in a monthly magazine. It matters not what your method, it's all advertising.

One man has said to me, "They all do it"; another said, "The higher-ups do it, why should not we?" I deny the charge. First, they do not all do it. There is still some honor in the medical profession. Second, the higher-ups do not advertise to the public. They may lecture at medical conventions, or send out printed articles to physicians only, and not the laity, on some particular subject that they are specializing in. This is in the line of education and is legitimate. If a physician has had the advantage of doing research work, or clinical advantages, and has developed a new line of surgical or medical treatment that has yielded more than ordinary results, it is his duty to make it known to the profession by reading a paper or demonstrating the results of his discovery to a recognized med-

ical society. Every man should strive to give as much to the profession that he represents as he gets out of it. This is presenting methods, but not advertising the man. But the little fellow—the fellow who has no special ability, and nothing to offer—the one who has not the patience to sit down and render honest service in a professional way until he establishes himself among his brother practitioners as one who has ability, but resorts to irregular methods of getting his name before the people, is the one who does the harm. If a physician has special ability along certain lines, his brother practitioners are quick to recognize it, and, all things being equal, will call on him for help in time of need. In this way we pay you a compliment. We pay you a compliment in presenting you to our patrons as a man of judgment. This, with your best effort to do good service and an honest desire to render the best within you, should be your only advertisement.

But you say, "The higher-ups do it, and why should not we?" Is this true? I have tried to show the difference between a man parading himself before the public and a clinician imparting knowledge. The Mayo Clinic is perhaps one of the best known and most popular medical organizations in the country. They have been well advertised, it is true. I have heard them accused of doing it themselves. I do not believe it is so. We have done that for them. We have sent them our difficult cases who are examined by their able corps of physicians, a diagnosis made if possible, and treatment is instituted according to their plan; uninfluenced by the patient's grandmother or aunt, social or domestic handicaps such as we have to contend with at home. While we have as good physicians and surgeons all over the country as they are, yet they get results because of their methods and we have heralded their names broadcast until they have become household property and everybody knows the road to Rochester, but the medical profession has advertised them.

The daily press is supposed to be the moulder of public opinion. Newspapers are often hard pressed for news, and will publish any news items without considering the importance or effect. Especially is this true of the small local paper of the rural district. Any physician constantly reporting his cases to these papers with his name prominently mentioned in every instance, does it for personal gain of course, and he is a liability to the profession. These articles are not general news articles. They are of interest to three classes of people—first, the physician who writes them, or permits them to be written, because he likes to see his name in print; second, the unthinking class who marvel and wonder at the volume of business you would have them think you are doing; and third, the

thinking people who see the unfairness of your intentions and accept them only with disgust. But what is the effect in general of this kind of medical propaganda? If it is permitted to continue, the devil will be to pay.

One of the clearest articles on this subject appeared in the January number of THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION. It is worth being reproduced and says: "A newspaper clipping bureau furnishes THE JOURNAL with clippings or abstracts of personal news and articles of a medical nature from practically every newspaper in Indiana. Very naturally we are amused and at times provoked to note the frequency with which some Indiana medical men, a few of them prominent and a limited number being officers of medical societies, permit their names to appear in the daily papers, often in repetition, concerning cases in which more or less so-called wonderful cures have been accomplished. In practically every instance the 'write up' gives indication of having either been written or inspired by the doctor whose name is mentioned. Lately THE JOURNAL office has been flooded with newspaper clippings, and even letters calling attention to the most flagrant abuse of ethics by certain members of our Association who seemingly court newspaper advertising and notoriety. It is conceivable that occasionally a doctor's name may appear in print in connection with a news note concerning some patient who has been given attention and the publicity occurs without the knowledge or consent of the doctor connected with the case, but such instances are rare, and such newspaper articles do not contain accounts of rare operations told in technical terms nor refer to wonderful or miraculous cures. Furthermore, the average newspaper does not publish these glowing tributes without knowing

that they will acceptable. In fact newspapers are quite willing to conform to the wishes of the medical profession that advertising of such character be eliminated. The fact of the matter is that this unethical newspaper advertising and cheap notoriety, if not sought, is sanctioned by some Indiana doctors, and it is time that our local medical societies call for an accounting. We fully realize that the rules of medical ethics are broken often by many of our medical men, and when we attempt the 'cleaning up' process we ought to touch many subjects, but we might begin on newspaper advertising, which is the most flagrant abuse of all at the present time. We again suggest, as we have suggested once before, that county medical society secretaries keep a scrap book and paste in it all the newspaper clippings concerning members which appear to be an abuse of medical ethics and ask the offending members for an explanation. If any guilty doctor refuses to explain or to show that he has been the victim of the kind of publicity of which we complain, without his knowledge or consent, then it is time to ask for his resignation from any reputable medical society and list him among the quacks where he belongs."

I realize how difficult it is to control this destructive tendency and there is no better place to enter a protest against it than in the county medical society. If we are going to continue to exist as a profession, we must suppress those who are traitors to our cause; or if we are going to surrender our principles and deliver ourselves over to an organization of medical brokers, let us throw down the bars, remove all restrictions and admit all who come, regardless of their loyalty.

Let us play the game fairly.

CAUSE AND RELIEF OF ACUTE INTESTINAL OBSTRUCTION

Charles H. Mayo, Rochester, Minn. (*Journal A. M. A.*, July 15, 1922), states that the high mortality attending ileus is lowered by early diagnosis, judgment and prompt action when the condition is relievable. Obstruction is due to the various types of hernia. The intraabdominal ileus is due to bands, volvulus and openings in the mesentery or in the diaphragm, serious because of difficulties of diagnosis. Obstruction just below the duodenum causes alkalosis with tetany. Obstruction lower in the tract is manifested by vomiting of foul fluids. Prompt surgical relief of high obstruction is discussed. Colonic obstructions are most commonly due to malignancy, diverticulitis or volvulus. Time should not be lost in instituting efforts to make an exact diagnosis of cause,

but surgical measures should be instituted at the earliest moment. The dangers of an unnecessary exploration are trivial compared with the grave risks of delay. Operation for relief of obstruction should be limited to a life-saving procedure, such as colostomy or enterostomy. The nature of the obstruction should be determined at operation, and future procedures should be based on the cause of obstruction. There is difficulty in differentiating diverticulitis from malignancy. Postoperative obstruction too often suffers from delay. The stomach tube is a valuable instrument in cases of obstruction. Early exploration should be made in post-operative obstruction to free adhesions. If exploration is delayed, ileostomy or jejunostomy is indicated. Local anesthesia or combined anesthesia is the method of choice.

**THE JOURNAL
OF THE
INDIANA STATE MEDICAL ASSOCIATION**

Devoted to the Interests of the Medical Profession of Indiana

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JULY 15, 1922

EDITORIALS

**THE JEKYLL-HYDE ATTITUDE OF THE
PUBLIC PRESS CONCERNING MEDICAL
PROGRESS AND PUBLIC
HEALTH**

In a recent number of the *Federation Bulletin* the Secretary of the Texas State Board of Medical Examiners presents a very interesting article, which we herewith reproduce in part, concerning the Jekyll-Hyde attitude of the public press concerning medical progress and public health. It is pointed out that while the press for the most part always has championed the cause of public health, and that it seldom has failed to give enthusiastic support to efforts to promote higher medical education and scientific research, yet there are many newspapers and periodicals, religious as well as secular, that have deliberately played into the hands of the quacks and charlatans and the unscrupulous politicians by accepting from ignorant medical vandals advertisements in which an attempt is made to discredit positive, scientific knowledge, the truth of which has been demonstrated thousands of times.

"If these editors or publishers do not believe that typhoid fever is distributed through the agency of the fly or through infected milk or water; if they do not believe that malaria is transmitted to man through the bite of a mosquito; if they do not believe that yellow fever is transmitted from one person to another by another species of the same pest; if they do not believe that bubonic plague is due to the bite of a flea which has fed on an infected rat or an infected person; if they do not believe that lockjaw and erysipelas are due to infectious organisms which gain entrance to the body with dust or dirt carried into a wound; if they do not believe that gonorrhœa and syphilis are the result of direct or indirect contact with an infected person or through soiled linen, drinking cups or some receptacle or utensil used in common; if they do not believe that devastating epidemics of typhoid fever have resulted from sewage contamination of domestic water supplies, then they should have the courage to express their convictions and to insist that city, county, state and the

national government shall abandon the existing very expensive but wholly unnecessary health departments, and thus save millions and millions of dollars to an already overburdened people.

"If, on the other hand, they do believe that these diseases are communicable and that as a result of failure on the part of ignorant, incompetent practitioners to so recognize them, or of indifference or inefficiency in the administration of health regulations thousands of lives have been needlessly sacrificed annually, then these newspaper editors and publishers are traitors—aye, Judases—to the communities which they serve, and which are supporting them, else they would not jeopardize the health or the lives of their patrons who always look to them for dependable direction in matters pertaining to the general welfare by publishing and spreading broadcast propaganda in which ignorant criminals (for most of the advertisers are practicing in violation of the criminal laws) set at naught the indisputable facts of medical science and assert that all diseases are due to subluxation of a spinal vertebra, to a distorted spinal foramen or to a pinched nerve, and that they may be easily and speedily cured by a simple thrust, a twist or a punch delivered on the spine of the sufferer by a miracle-working chiropractor or some other equally ignorant knave.

"There may be a few editors or publishers who are so densely ignorant—though none of them would admit it—that they do not know that the causative factor of malaria, the plasmodium, in the field of a microscope is as demonstrable as a fly on the back of an editor's hand; that with the aid of the lens the bacillus of typhoid is just as discernable as a boll-weevil is with the unaided eye; that the treponema of syphilis is as perceptible with the aid of a microscope as a flea on a dog's back; that the coffee-bean-shaped coccus of gonorrhœa is just as real as a chicken mite, or that the bacillus of tuberculosis is just as positive an entity as is that of its human host. But their ignorance of these demonstrable disease-producing organisms cannot negative the fact of their existence nor rob them of their dreadful potency.

"These editors and publishers may or may not know that the pathologies of such diseases as arthritis, rheumatism, pernicious anemia, leukemia, Addison's disease, Bright's disease, paralysis agitans, pellagra, diabetes, hypertension, cancer, and other chronic, incurable diseases, from the victims of which—through the publication of fraudulently intended misrepresentations concerning their causes and his ability to cure them—the medical impostor reaps a golden harvest, are just as positively demonstrable by a skilled pathologist as any other facts of science. But it is not the fault of scientific

medicine that neither the publisher nor his side partner, the medical mountebank, are not aware of this. They probably are equally ignorant of the physics of the gas engine, the steam locomotive, or the radio. But what would happen to them if they attempted to discredit the laws of physics?

"Frequently in the last three or four years the newspapers have made vigorous appeals for financial aid or for food or clothing for the starving Russians, the down-trodden Armenians, or for the French waifs who were orphaned and left unprovided for by the world war. They should know that there are thousands of men, women and children in their own country who are far more wretched than the Russians, the Armenians or the French waifs, since the latter could be made supremely happy by providing them with shelter, clothing, and a liberal supply of wholesome food, while the former—hopelessly incurable—must drag wearily, painfully on in the darkness of despond to the "Valley of Death", constantly scanning the horizon for the dawning of a new day—for a day which may bring them promise of relief from ceaseless torture. These are the pitiable, helpless creatures to whom the lurking advertisements of human vultures offer a ray of hope—a phantom oasis in the desert of their wretchedness.

"It is possible that these publishers do not know what the fiendish impostors know only too well—that the victims of cancer, Bright's disease, tuberculosis, diabetes, pernicious anemia and other chronic, incurable diseases grasp at the promises made in such advertisements as a drowning person grasps at straws; and that in consciously aiding or abetting ignorant pretenders to take advantage of credulity in order to perpetrate such frauds they are equally guilty of dishonest action, and that they should be held criminally responsible for it notwithstanding the legality of their advertising practices?

"One might admire the daring of a bandit who goes out on the highway at midnight to pull off a hold-up, in the execution of which he must risk his liberty and possibly his life. Such a person is a prince in contrast with the unscrupulous medical vandal who would take the last farthing from the pocket of an unfortunate, credulous human on the promise of effecting the cure of an incurable malady; and we might respect the highwayman quite as much as we respect a publisher who, conscious of the misleading, fraudulent statements contained in a medical advertisement—but knowing that he is within the law in publishing it, accepts it as a source of revenue. We have little respect for a man, be he preacher, prophet or publisher, who accepts tribute and bread from an indulgent, confiding public with one hand while pre-

paring a poison potion for it with the other. 'It is a mean dog that bites the hand which feeds it.'

"Contemplate the insolence of a medical impostor in taking a widow's mite for sitting at the bedside of a dying child, thrusting at its spine in a pretended effort to readjust a subluxated vertebra—which is an impossibility except in a fracture—while the little innocent is steadily cyanosing as the result of laryngeal diphtheria. An anxious mother—recently widowed by pneumonia via the chiropractic route—is standing by, alternately wringing her hands and wiping away her tears and, between the stridulous, rasping, respiratory efforts of her strangling infant, crying out piteously, 'Doctor (?), for God's sake, doctor; can't something be done to save my baby?' Antitoxin, which would have averted this painful scene, intubation and tracheotomy, either of which—as a last resort—might have saved the little darling, were meaningless terms to this benighted hypocrite, and, after a few more of his useless thrusts and a few more gasping efforts on the little sufferer to get oxygen into her lungs, the struggle ceased, the little eyelids closed and the idol of a mother's heart lay cold and still in death—a victim of commercial greed plus medical incompetency.

"To whom should this tragedy be charged? Should it be charged to the monster who ignorantly or, knowing that other and more effectual treatment than he could give was available, deliberately permitted a helpless infant to strangle to death or should it be charged to the publisher by whom, through a flaming advertisement in the Sunday-morning issue of his paper, the unsuspecting, simple-minded mother of this child was duped into placing her seriously-sick baby in incompetent hands? We leave it to you and to the conscience of the publisher to answer."

"UNDERWEIGHT" A DELUSION

Is there but one normal, healthy standard weight corresponding to every height, so that he who exceeds it is "overweight" and he who falls below it "underweight"? That this idea is a dangerous fallacy is contended by Charles K. Taylor, of the Carteret Academy at South Orange, N. J., writing in *The Outlook* (New York) on "The Great Underweight Delusion." According to Mr. Taylor, a "stocky" boy, or a slender one, may be just as normal and healthy as one who has the "standard" proportions of the Apollo Belvedere. They are of different types, that is all. Some people are doubtless too fat and others too thin, but that fact is to be ascertained, not solely by comparing weight with the height, but by a system of measurements taking both these figures into account.

Mr. Taylor has worked for years to construct a system of tables for this purpose, and thinks he has now a satisfactory method of applying his ideas in practice. He writes:

"Children are frequently slender because it happens to be a hereditary type just as it is hereditary for some to be stockier and heavier than the average. Some races are typically slender, with weight below the general average of humans.

"The very essence of our delusion is the claim that there is only one normal and healthy type of build—the 'average'—and if children (not to mention adults) happen to be more slender than this highly worshipful average, then, obviously, *obviously!* something is wrong with them. They are *under-weight!* A frightful term that sends whole communities into providing fattening diets for perfectly healthy children and doing everything that uncanny genius will suggest to make a lot of normal children morbid over matters they do not need to worry about.

"It might be interesting for some one to analyze the Worship of the Average. I don't know what we would do without it! Why, our whole educational system is based upon it! The *average* child! And that is why, though the duller-than-average child is perhaps prodded up a little, children brighter than average are caught fast in the machine, so that educationally they are rarely able to come anywhere near their capacities.

"So when we insist that children should at least come up to an average in weight we are doing only what we also do in the classroom, with this difference, however: When a child's weight is over-average, then we are likely to smile with approval; but when a child is mentally over-average, well, we just let that child remain in the grip of the machine that keeps achievement down to the average scale of things.

"Our stand is simply this—that it is just as normal and healthy for some children to be more slender than the average and for others to be stocky or thickset, as for still others to approximate the average, that it is a matter of inherited type of build, and all we need to do is to see that a child is properly developed for his or her normal type of build.

"When a child is in good physical condition, and particularly when that child's muscles are not flabby, but firm and efficient, then we may be sure that the child's weight is correct, *no matter what it is.* And our work, then, is merely to see that a child has a physical development corresponding to his or her type of build.

"It will take a very serious mental upheaval to bring many of us to see that the question is health and development, and not one of weight, but we are coming to it little by little. And once this is accepted, then another question will come promptly into being. Here is this one: 'How are you going to know when a child is well developed?' Nor is this going to be difficult to answer."

Mr. Taylor's plan is to prepare, from an actual study of healthy children of various heights and weights, tables on what he calls "a height-weight basis." Instead of requiring one particular weight for a given height, these tables give bodily measurements corresponding with various weights, running from the slender type to the "stocky" and the "thick-set." By comparison with these it is easy to see whether the

boy is normally developed for his particular height and weight. He adds:

"Our standpoint is based on an intensive study of some thousands of children over quite a number of years. If a child is healthy, and is not one of those typically 'fat' children, then the child's weight is correct, no matter what it is."—*The Literary Digest*, May 6.

PROSTITUTING THE CHURCH IN THE INTERESTS OF QUACKERY

A few weeks ago the chiropractors exploited their cult and inconsistent form of treatment, and it is said even the pulpit was utilized for the exhibition of "adjustments", in one of the Methodist churches at Elkhart. Following close upon the heels of this came blatant newspaper announcements by the chiropractors to the effect that a similar performance would be given in one of the Methodist churches in Fort Wayne. It so happens that a number of representative regular physicians are members of that church and they protested concerning the desecration of the church by any such proceeding, and a protest also was filed by several of the societies affiliated with the church, to say nothing of many protests from individual members. However, those responsible for the renting of the church had cast the die and they begged off on the spurious plea that a contract had been made and must be fulfilled. Accordingly the exploitation of the chiropractic cult in the First Methodist Church of Fort Wayne was carried through in full accordance with the announcements contained in the daily newspapers, and in direct opposition to the wishes of a very large representation of the membership of the church. The strange feature about the action is the fact that prior to this episode the church could not be obtained for any purpose not directly religious in character, even such an innocent entertainment as a concert providing an admission fee was charged, yet in the instance under discussion a rule of the church was broken and a good sized rental fee was accepted.

It is a well known fact that some of the worst frauds are covered by the cloak of religion and the sanctity of the church. Ministers as a class proverbially are known as supporters, usually innocently, of quackery, and oftentimes the rankest forms of commercial deception and fraud. The patent medicine evil in its palmiest days owed its success very largely to the endorsement of ministers and to the effect secured by advertising in religious papers. When practically all other newspapers and periodicals had barred from their pages patent medicine and quack doctor advertisements, the religious press still continued to carry such advertising with shameless disregard for decency or honesty.

A few months ago we published in THE

JOURNAL an editorial entitled "The Doctor's Relation to the Church", in which we pointed out that the principal reason why doctors do not identify themselves more often with churches is because they not only see so much hypocrisy, deception and dishonesty within the church walls, but no effort is made to correct the evils that exist. We are fully cognizant of the fact that hypocrites will get in the church in spite of all that is done to keep them out, and that oftentimes the church will be made a cloak for shady transactions, but this ought to be limited to the individual members of the church and not to the church as a whole. The church stands or should stand for the highest ideals of life, and should be unwavering in its devotion to moral principles. The only reason why a church ever deviates from the path of rectitude is because its leader either is not sincere and has a "screw loose" in his ethical make-up or he hasn't the moral backbone to stand up for what he knows to be right.

In the case under consideration the pastor of the First Methodist Church of Fort Wayne should have been true to his calling and to the Church he represents and said to the Board of Trustees or those responsible for renting the church for other than religious purposes, "Gentlemen, the church over which I preside is for religious purposes and must not be desecrated knowingly, or its motives questioned. No matter what it costs you in financial loss or embarrassment, the ideals of the Church must be preserved and the church not prostituted for commercial ends." Had he taken this stand and refused to have anything more to do with the church if it deviated from the path of rectitude he would have had the support of probably a majority of the membership of his church, and he would have had the satisfaction of living up to the high ideals of the Church.

Wholly aside from the question of the merits of chiropractic which is unscientific, inconsistent, and based upon the rankest ignorance of the cause and effect of disease to say nothing of being practiced for the most part by men and women with not even ordinary education, the attitude of the church should be one of indifference to it or the teachings and practices of any other medical sect. The Church, Methodist or any other, should stand for the highest ideals, and at all times for truth and honesty. Under no circumstances should it endorse openly or by inference *any* school of medicine, and opening the doors of the church to a pseudo-medical cult which represents a lack of education, training and experience for the care of human ills, and the practicing members of which, in the State of Indiana, are law breakers, is a blot upon the Church, to say nothing of being an insult to the members of the Church, especially

the medical men who have a right to expect something better.

The First Methodist Church of Fort Wayne did itself irreparable damage and lowered itself in the estimation of many thinking people when it permitted the chiropractors to desecrate the church by a lecture extolling the virtues of chiropractic, and the whole proceeding, tinctured with commercialism from beginning to end, has been nauseating to many members of the Church as well as many on the outside. A great principle was at stake, and the Church sacrificed its honor and its standing rather than defend that principle. The Church needs the respect and confidence not only of its own members but those on the outside, and it loses all this when it stoops to such an incident as the one to which we refer.

UNETHICAL NEWSPAPER ADVERTISING

As the readers of THE JOURNAL know, we have had considerable to say editorially concerning the tendency of some doctors to seek newspaper notoriety by permitting their names to be published in connection with the medical or surgical treatment of cases. These editorial comments have been inspired by complaints from various portions of the State as to the unethical conduct of certain physicians who persist in using the newspapers to further their own ends. Within the last few months dozens of newspaper clippings have been received at the office of THE JOURNAL in which a certain doctor, president of his county medical society, has been exploited in connection with his medical or surgical attention to cases. Very naturally the local medical profession has not looked with favor upon such unethical conduct, and the editor of THE JOURNAL wrote the offending doctor a letter, suggesting that, as president of his county medical society, it was not only unethical but in rather bad taste to continue to exploit himself in the daily newspapers and by so doing put himself on a par with the advertising quack and charlatan. The aforesaid doctor wrote back with the specious argument that he was no worse than the Mayos and those connected with the Long Hospital at Indianapolis, both of whom were his worst competitors in securing "business", but that objection to his practice of giving items to the newspapers would meet with improvement on his part. It was pointed out to him that neither the Mayos nor those connected with the Long Hospital in Indianapolis would take the trouble to furnish items concerning themselves for publication in some distant paper and that, in all probability, they would make every endeavor to suppress such publicity. On the other hand it was pointed out that whenever the doctor's name

appears regularly in local newspapers in his vicinity it is a sure bet that he has been responsible for the information obtained by the newspapers and courts the publicity given. It also was pointed out that this sort of publicity could be checked and not only make a better impression upon medical confreres in the vicinity but upon the public as well. The correspondence evidently was not considered private, in proof of which a newspaper clipping concerning the matter is herewith reproduced from the *Elwood Call-Leader* of Thursday, June 1:

DR. BULSON BUTTS IN

Editor of Medical Journal Would Suppress Newspaper Items.

Dr. Albert E. Bulson, Jr., editor of the Journal of the Indiana State Medical Association, is desirous of having the physicians of the state keep from the newspapers any report of cases of illness and of operations performed wherein the name of the physician is mentioned, saying that it is "unethical."

It appears that there are some persons in Elwood who have possibly been envious at the mention of some of the physicians' names in the newspapers, appearing in the papers frequently, who have written Dr. Bulson saying that the code is being violated by this "advertising" and the doctor takes the matter up with the local physicians.

The physician who gives the newspaper reporter information that is of interest to the readers is entitled to have his name connected with the case or have it omitted as he sees fit. Unless the request is made not to use it the name will appear, and if it is classed as advertising all well and good. The order of things has changed with the passing of time and there are progressive physicians nowadays as well as fogies.

It is very evident, judging from what has transpired, that the doctor in question does court newspaper publicity and that he has no intention of mending his ways or courting the respect of his confreres. In his letter to the editor of THE JOURNAL he asks for a copy of our code of ethics, which he facetiously calls "the code of essecks", or a quotation of the section referring to publicity. We herewith comply with the request:

"Solicitation of patients by physicians as individuals, or collectively in groups by whatsoever name these be called, or by institutions or organizations, whether by circulars or advertisements, or by personal communications, is unprofessional. That does not prohibit ethical institutions from a legitimate advertisement of location, physical surroundings and special class—if any—of patients accommodated. It is equally unprofessional to procure patients by indirection through solicitors or agents of any kind, or by indirect advertisement, or by furnishing or inspiring newspaper or magazine comments concerning cases in which the physician has been or is concerned. All other self-laudations defy the traditions and lower the tone of any profession, and so are intolerable. The most worthy and effective advertisement possible, even for a young physician, and especially with his brother physicians, is the establishment of a well-merited reputation for professional ability and fidelity. This cannot be forced, but must be the outcome of character and conduct. The publication or circulation of ordinary

simple business cards, being a matter of personal taste or local custom, and sometimes of convenience, is not *per se* improper. As implied, it is unprofessional to disregard local customs and offend recognized ideals in publishing or circulating such cards.

"It is unprofessional to promote radical cures: to boast of cures and secret methods of treatment or remedies: to exhibit certificates of skill or of success in the treatment of diseases: or to employ any methods to gain the attention of the public for the purpose of obtaining patients."

We have no desire to enter into local medical squabbles of any sort, but the Indiana State Medical Association stands for certain principles and a conduct on the part of its members which is above reasonable reproach. If the president of one of the component societies of the Indiana State Medical Association sees fit to break a leading rule of professional ethics and ordinary decency and then brazenly defies his confreres who attempt to influence him in reforming his ways for his own interest as well as for the interests of the profession, it is time for some action on the part of a medical society which will tend to purge itself of such conduct on the part of one of its members, and in this case, THE JOURNAL'S good intentions having been abused, there is ample reason for the stand herewith taken.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

THE typhoid season is here. How many doctors are remembering the value of typhoid vaccination and advocating it to those who are going to tour and camp in places where water and food supplies are liable to be contaminated?

PROHIBITION has done much to stimulate the consumption of confectionery and soft drinks. The desire for a stimulant to take the place of alcoholic beverages has been met by the manufacture of about fifty-seven varieties of soft drinks containing caffeine, and it is said that the sales of one well known stimulating soft drink have been almost quadrupled since the

Volstead Act became operative. That some of these caffeine-tinctured soft drinks are positively injurious as a result of the stimulating effect and habit formed for increasing amounts cannot be doubted. Perhaps in the end we will find even more stimulating soft drink addicts and deleterious effects therefrom than we ever had from alcoholic beverages.

RECENTLY there has been much agitation concerning the necessity of having sufficient vitamins in our diet, and certain manufacturers—taking advantage of this fact—have been advertising extensively the vitamin value of certain manufactured products sold at enormous profit. It would be well for physicians to tell their patients that it is unnecessary to buy these proprietary preparations in order to secure an adequate amount of vitamins for the diet. Nutritional studies indicate that fruits and vegetables contain a sufficient amount of vitamins, and too much stress cannot be laid on the importance of taking a generous amount of fruits and vegetables, and this is necessary to offset the acid character of minerals found in meat, cereals and eggs.

THE President of our State Medical Association was a little slow in making his committee appointments, and we are under the impression that he procrastinated because he thought that most of the committees do not functionate anyway and that a late appointment is just as good as an early one. In this he is quite right. In fact we are in favor of abolishing all committees except those that show some signs of life. It is the height of absurdity to appoint three or five doctors on a committee, and at the eleventh hour have a committee report based on no actual work of the committee, prepared hurriedly by the chairman, and presented at the annual session of the Association. The fewer and the smaller the committees the better, but let us do away with committees that do not functionate.

ONE of the unfortunate situations produced by the present numerous perplexing medical laws is that of the inability of some of the ablest men in the profession to secure legalization in states which made graduation from a Class A medical college, A. M. A. rating, the statutory qualification for license—either by examination or through reciprocity. This requirement defeats the purpose for which reciprocity was intended and for which this Federation was said to have been organized, and it has built a stone wall around good men of all schools of practice, many of whom are superior in mentality and in medical ability to the men who proposed the laws which limited their sphere of usefulness. I know of no good reason why educated, ethical physicians who graduated from the best colleges

we had twenty-five years ago and who have since been in continuous reputable practice should be barred from the privilege of the license in any state of the Union.—T. J. Crowe, Dallas, Texas, *Federation Bulletin*, June, 1922.

IN a recent paper, "Postoperative Pulmonary Complications", published in *Current Researches in Anesthesia and Analgesia* for March, 1922, Dr. Alma Vedin, anesthetist to the New York Hospital, gives some pertinent recommendations for careful examination before and intelligent care after operations. The author states that in an analysis of 7900 operations there were 120 postoperative complications or 1.51 per cent. The complications consisted of lobar and bronchopneumonia, acute bronchitis, pleurisy (acute fibrinous, sero-fibrinous and suppurative), and embolism of the pulmonary artery, the exact figures being 63 lobar pneumonia, 20 bronchial, 14 acute bronchitis, 11 pleurisy and 12 of embolism of the pulmonary artery. There were 29 deaths; of the 12 cases of embolism, 10 died. An analysis of these complications following abdominal operations shows that there is a large percentage following upper abdominal as compared with those in the lower abdominal regions. The greater number of complications appeared within 2 days following operation.

VACATIONS are popular with all classes of people. Probably the doctor is the least inclined to take a vacation because he thinks he cannot find an opportunity to get away from his work. However, if he waits for the time when he does not have responsibilities he never will get away. On the other hand, he owes it to himself and to those whom he serves to be refreshed in mind and body, and this can be brought about only through the relaxation and the change resulting from an entire divorce from every-day work. This does not mean that the doctor gets a vacation when he leaves his office for a few hours or a day or two to fish in some nearby lake where he is in constant touch with his home work, but it does mean that he must get far away from his home, with complete change of climate and surroundings, and divorce himself entirely from his work. Two to six weeks in the mountains or at the seashore, or a long automobile trip taken leisurely usually affords the beneficial results that bring about a physical and mental rejuvenation that finds its response in more and better work for the ensuing months.

THE Division of Venereal Diseases of the United States Public Health Service has arranged with several prominent syphilographers and genito-urinary surgeons whereby the advice

and counsel of these authorities is to be made available to general practitioners. The plan is referred to as "Consultation by Correspondence".

The method of utilizing this service is for private practitioners who have under their care any cases of venereal infection which they wish to describe to a specialist and ask for advice in regard to treatment or to the method of procedure in handling the case, to send to the State Board of Health a letter setting forth all of the data which they wish brought to the attention of the proper specialists. These letters will be forwarded to the Public Health Service, who in turn will secure an answer to the communication from the best known specialist on the particular phase of the subject discussed in the communication from the private practitioner. It is believed that this sort of correspondence between private physicians and well known specialists will be of material benefit in many cases. This service is, of course, entirely free of charge.

ALL students at the University of Arizona at Tucson sleep in the open air on sleeping porches. This is obligatory for all those who live on the college grounds, and it has been found advantageous from all points of view, we are told by A. O. Neal, Registrar of the University, in an article contributed to *The Nation's Health*. This Arizona University, Mr. Neal tells us, is unique in many ways. In percentage of growth in the past six years it has exceeded all institutions of higher education except four. The housing of the increasing number of students is a vital problem, and its solution has been the plan in which all students sleep on open-air porches. The experience of twenty years has led the University authorities to believe that it is satisfactory from every point of view. It affords rest and sleep in the open, the benefits of which are shown in the vitality and work of the students. It is not unusual for students to make extraordinary gains in weight and endurance in remarkably short time. Few students are willing to return to indoor sleeping rooms after having had a semester's experience sleeping in the open air. Open air sleeping is adaptable to localities where the climate is not so favorable as in Arizona, and there are many colleges and institutions of learning that could adopt to advantage the open-air sleeping.—Abs. from *Literary Digest*, May 6.

IN a paper read before the Chicago Branch of the American Pharmaceutical Association in January of this year, Dr. A. S. Burdick, of Chicago, gives a review of the manufacture of synthetic medicinal chemicals in America. He calls attention to the fact that before the late war, in spite of the fact that the United States had almost illimitable sources to draw on for raw materials through its coal mines, coke

ovens and gas plants, its manufacture of medicinal synthetics was virtually limited to the salicylates, including salicylic acid and its salts, acetylsalicylic acid and salol, and small quantities of saccharan, phenolphthalein, and argyrol, and most of these were made by German-owned corporations. Under the stress of necessity, and responding to the call of the government, a number of American manufacturers undertook the production of the most important synthetic medicinals. The number of those which might really be called indispensable was not as large as might be expected—perhaps there were a dozen all told—and of these all are now being made in the United States. He closes his paper with the following appeal which should receive a response from every physician in the United States. "The achievements of the last few years, of which we are all justly proud, are due largely to the fact that we were forced to cut loose from the apron strings of German science. We found we could walk alone, and some of us now think we might 'grow up'; but there are people in the United States who still believe that only the Germans know how to make dyes and drugs, and that we should return humbly to our former condition of scientific dependence. Such a surrender then—for surrender it will be—means setting back the hands of the clock so far as the progress of American medicine goes. It means that we shall be unable to contribute our proper share to the scientific work of the world during the next generation. It means that medicine will not develop in this country as it will elsewhere in the world, where chemical sciences are recognized as being fundamental to a knowledge of the human body in health and disease and to the maintenance of the public welfare. I appeal to you whose interests are closely allied with those of the chemical manufacturer, for support at this critical time which means so much to the future of this, our common country."

DEATHS

MALINDA M. WHEELER, M.D., died at her home in Noblesville, May 25. She was a graduate of the Beach Medical Institute, Indianapolis, in 1885.

E. L. BROWN, M.D., died at his home in Thorntown, May 15, at the age of seventy-six years. Dr. Brown graduated from the Eclectic Medical College of Cincinnati, in 1879.

CHARLES M. SMETHERS, M.D., of Spiceland, died at his home, May 30, following a long illness. Dr. Smethers was fifty-two years of age. He graduated from the Illinois Medical College, Chicago, in 1903.

MARTIN V. B. NEWCOMER, M.D., of Tipton, died June 13, at the age of eighty-six years. He was graduated from the Medical College of Ohio, Cincinnati, in 1867. Dr. Newcomer was a member of the Tipton County Medical Society, the Indiana State Medical Association and the American Medical Association.

SAMUEL D. HATFIELD, M.D., died June 2, as the result of an accidental gun shot. Dr. Hatfield was forty-one years of age. He graduated from the Louisville Medical College in 1906. Dr. Hatfield was a member of the Howard County Medical Society, the Indiana State Medical Association and the American Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION. Patronize these advertisers, for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

THE Wells County Medical Society met at Bluffton, June 6.

DR. W. B. HURON has been made county health officer for Tipton County.

DR. W. F. CLIPPINGER has been reappointed county physician for Vanderburgh County for another year.

DR. P. C. BURNS, of Linton, has completed a post-graduate course in medicine in Philadelphia.

THE Adams County Medical Society held a meeting at Berne, June 9, in the office of Dr. A. Reusser.

JAMES W. ALDRIDGE, M.D., of Covington was married June 15 to Miss Martha Coffing of the same city.

DR. WALTER McBETH has moved from Burnettsville to Royal Centre where he will practice medicine.

PROFESSOR HOWARD BISHOP LEWIS has been appointed to the chair of physiology at the University of Michigan.

THE Huntington County Medical Society met June 6, at Huntington. A paper was presented by Dr. E. T. Dippell.

FOUR nurses were graduated from Neuronhurst, Dr. W. B. Fletcher's Sanatorium, Indianapolis, Thursday, June 15.

THE Methodist Hospital of Indianapolis has installed a new \$7,000 x-ray machine which carries 285,000 volts of electricity.

DR. LEWIS C. TAYLOR, Springfield, has resigned his position as executive secretary of the state board of medical examiners.

DR. F. H. RILEY of Jamestown has received a federal appointment at the Jewish Hospital at Cincinnati, assuming duties on June 15.

DR. HILDING BERGLUND, of Boston, has been awarded the John White Browne scholarship for research at the Harvard Medical School.

DR. ETHEL M. WATTERS, of San Francisco, has been appointed consultant in the administration of the Sheppard-Towner Maternity Act.

THE Tenth District Medical Society held a meeting June 8, at Valparaiso. A paper was presented by Dr. James H. Stygal, of Indianapolis.

DR. GEORGE F. BEASLEY of Lafayette was injured seriously on June 21 when he fell from a step-ladder to the ground. He is eighty years of age.

THE Henry County Medical Society held its monthly meeting June 13, at Newcastle. A paper was presented by Dr. Bernard Erdman, of Indianapolis.

THE Fountain-Warren Medical Society held its regular meeting at Veedersburg, Thursday, May 30. Dr. F. C. Walker, of Indianapolis, presented a paper.

DR. DEAN METCALF of Fort Wayne is spending six weeks in the East, taking the post-graduate course given annually by the Trudeau School of Tuberculosis.

THE second annual commencement exercises of the St. Joseph's Hospital School for Nurses, Fort Wayne, was held on May 18. Seven nurses received their diplomas.

THE Clark Memorial Hospital, at Jeffersonville, Indiana, was dedicated June 15. The hospital has been provided as a memorial of the county's dead in the world war.

DR. ESPY K. SCHURTZ, of Waterloo, Indiana, is attending a course of instruction on tuberculosis at Saranac Lake. He will be absent from his practice for six weeks.

THE Kosciusko County Medical Society held a meeting at Warsaw, May 30. Dr. H. A. Shaffer, of Rochester, presented a paper on "Medical and Surgical Border Lines."

THE Delaware-Blackford County Medical Society held a meeting at Muncie, June 2. A paper on "Evaluation of Symptoms in Diagnosis" was presented by Dr. O. E. Stern, of Indianapolis.

DR. ROSCOE HYDE, of Hartford City, and Miss Elizabeth Weghorst, of Indianapolis, were married Thursday, June 8. They will make their home on West Washington street, Hartford City.

DR. JAMES M. DINNEN of Fort Wayne has been appointed chief surgeon of the Lake Erie & Western Railroad, with general direction of the medical and sanitary work of the entire road.

DR. M. F. JOHNSON, of Richmond, has been elected president of the Sixth District Medical Society. Dr. R. D. Morrow, of Connersville, was made secretary-treasurer and Dr. Smith, of Newcastle, councilor.

THE Madison County Medical Society held its annual outing at Idlewold Park, near Pendleton, June 20. Dr. John Oliver of Indianapolis presented a paper, the subject of which was "Tuberculosis of the Spine."

DR. O. M. DEARDORFF, formerly of Hagers-town, recently has completed a post-graduate course in surgery at the Chicago Post-Graduate School, and located at Muncie, 243-5 Johnson Block, for the practice of medicine and surgery.

ANNOUNCEMENT is made of an Anesthetists' Congress to be held in Columbus, Ohio, October 30 and 31 and November 1, 1922. The Congress is to be international in character, and promises to be the biggest gathering of its kind ever held.

THE Benton County Medical Society held its regular June meeting at Boswell. Drs. F. S. Crockett and Romberger of Lafayette presented papers. Following the scientific meeting an informal reception was held at the home of Dr. and Mrs. O. M. Flack.

DR. F. M. STACKHOUSE of Kingman has retired from the active practice of medicine on account of disabilities received in an accident a year ago. He has purchased a small news-

paper at Plymouth, Ohio, and has taken up the work of editor and publisher.

THE Sixth District Medical Society held its annual convention in Connersville, June 1. Papers were presented by Dr. Schonwald of College Corner; Dr. Smith of Newcastle; Dr. J. F. Bowen of Occident; Dr. Craft of Indianapolis and Dr. Segar of Indianapolis.

DR. ERIC CRULL of the Irene Byron Tuberculosis Hospital, Fort Wayne, and Dr. James Stygall of Indianapolis, medical director of the Indiana Tuberculosis League, motored to Saranac Lake, New York, the first of June to take the six weeks' postgraduate course in tuberculosis.

DR. MORSE HARROD of Fort Wayne was elected president of the National Eclectic Medical Association at their recent meeting held in Indianapolis. Dr. J. E. Holman of Indianapolis was chosen first vice-president and Dr. W. P. Best of Indianapolis, recording secretary.

THE Elkhart County Medical Society held its annual outing at South Shore Inn, Lake Wawasee, June 8. About 125 members and guests were present. The afternoon was spent in games, and dinner was served at six o'clock. Colonel Seth Bullock of South Bend was the speaker of the evening.

THE Muncie Academy of Medicine held a meeting at the Hotel Roberts, Muncie, June 9. Dr. Etta Charles, of Anderson, read a paper on "Gas oxygen Anesthesia", and Dr. Clay Ball, of Muncie, presented a paper on "Ether Anesthesia." A paper on "Local Anesthesia" was presented by Dr. W. C. Moore, of Muncie.

THE second meeting of the Medical Women's International Association will be held at Geneva, Switzerland, September 4 to 17, 1922. Each society of medical women in the world is invited to send one eligible delegate and an additional delegate for every hundred members. Clinics in the different European countries may be visited en route.

THE new Harvard School of Public Health, which will open in September, is offering several fellowships of \$1,200 each, for the year 1922-23. Special consideration will be given students working for their doctor's degree. Applications for these fellowships should be made to the secretary, School of Public Health, 240 Longwood Avenue, Boston, not later than August 1.

THE Third International Congress of the History of Medicine will be held in London, July 17 to 22, with Dr. Charles Singer as president. Anyone desiring information concerning the congress should communicate with Dr. J. D. Rolleston, 21 Alexandria Mansions, King's Road, London, S. W. 3. The official delegate from the United States is Lieutenant Colonel Fielding H. Garrison.

DR. HENRY LOWNDES LYNNAH, of New York City, died March 31, 1922. Dr. Lynah was well known in the practice of the specialty of bronchoscopy and esophagoscopy. Dr. Lynah was one of the founders of the American Bronchoscopic Society. He was instructor in laryngology and intubation at the University of Bellevue Hospital Medical College and was professor of bronchoscopy and esophagoscopy in the New York Polyclinic.

AT a meeting held June 7 at the Bliss Hotel, Bluffton, the Anti-Tuberculosis Society of Wells County was reorganized. Dr. Eric Crull, of the Irene Byron Tuberculosis Hospital, Fort Wayne, and Mr. Cosper, publicity man for the state organization, were the speakers. Howard Uhlman, Bluffton, was elected president; Mrs. J. F. Decker, vice-president; and Howard Thomas, secretary. They plan to employ an executive secretary for the county work, with a central office in Bluffton.

SIR ALFRED PEARCE GOULD, surgeon, died suddenly in London, April 19. He was dean of the faculty of medicine of the University of London and was lecturer on anatomy at the Westminster Hospital, posts which he resigned on his election as assistant surgeon to the Middlesex Hospital. Dr. Gould was president of the Royal Society of Medicine and of the Roentgen Society. During the war he was active in his post as Officer-in-Charge of the Surgical Division of the Third London General Hospital at Wandsworth. He published the Elements of Surgical Diagnosis and was joint editor of the International Textbook of Surgery.

DR. ALFRED G. LONG, of Cambridge, Mass., has arrived in Indianapolis to become director of the division of bacteriology and pathology of the State Department of Health. He succeeds Dr. William Shimer, who has resigned to become head of bacteriological work at St. Vincent's Hospital.

As an indication that occupational strain is greater in the practice of medicine than in any

other occupation, statistics for 1921 show that physicians head the list of suicides. During 1921 86 doctors, 57 judges, 37 bank presidents, 21 clergymen, 10 editors, 7 mayors and 7 members of legislatures took their own lives.

ANNOUNCEMENT has been made of the scope of the new school of public health which will be opened at Harvard University in September. Systematic instruction will be given leading to the degrees of bachelor of public health, master of public health and doctor of public health, while students in the school will be eligible under certain conditions to be candidates for the degree of doctor of philosophy in hygiene or of doctor of medical sciences. The new school will include departments of industrial hygiene and tropical medicine which have hitherto been a part of the Harvard Medical School. Dr. David L. Edsall will serve as dean of both the school of public health and the medical school.

DURING June the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

Borcherdt Malt Extract Co.:

Borcherdt's Malt Cod Liver Oil and Phosphorus.

Intra Products Co.:

Ven Sterile Solution Procaine 0.5 Per Cent.

Ven Sterile Solution Procaine 2.0 Per Cent.

Ven Sterile Solution Procaine 5.0 Per Cent.

Lederle Antitoxin Laboratories:

Pituitary Extract-Lederle (Obstetrical).

Pituitary Extract-Lederle (Surgical).

Parke, Davis and Co.:

Diphtheria Antitoxin piston syringe containers.

Antitetanic Serum piston syringe containers.

Antigonococcic Serum 12 Cc. bulbs.

Antistreptococcic Serum 20 Cc. piston syringe container.

Antistreptococcic Serum 50 Cc. piston syringe container.

Anti-Anthrax Serum.

Antimeningococcic Serum.

Diphtheria Toxin-Antitoxin Mixture.

Tuberculin B. F. (Bovine).

Gonococcus Vaccine 1 Cc. bulbs.

Gonococcus Vaccine 1 Cc. syringe.

Gonococcus Vaccine 5 Cc. bulb.

Gonococcus Vaccine 20 Cc. bulb.

Erysipelas and Prodigiosus Toxins (Coley) 1 Cc. bulb.

Erysipelas and Prodigiosus Toxins (Coley) 15 Cc. bulb.

SOCIETY PROCEEDINGS

COUNCILORS' MEMBERSHIP CONTEST					
District—Councilor	No. of Counties	1921 Memberships	1922 Memberships to date	Percentage	
1st—Dr. Willis	7	176	174	.99	
2nd—Dr. Schmadel	7	149	142	.95	
3rd—Dr. Leach	9	130	116	.89	
4th—Dr. Osterman	10	138	136	.98	
5th—Dr. Weinstein	5	158	156	.98	
6th—Dr. Spilman	8	150	160	1.07	
7th—Dr. Earp	4	425	442	1.04	
8th—Dr. Conrad	5	172	158	.92	
9th—Dr. Moffitt	10	253	247	.97	
10th—Dr. Shanklin	5	151	138	.91	
11th—Dr. Black	6	191	191	1.00	
12th—Dr. Morgan	8	241	240	.99	
13th—Dr. Berteling	8	274	254	.92	
	92	2608	2554		

KNOX COUNTY

The Knox County Medical Society held its June meeting at the Y. M. C. A., Vincennes, June 13, and had as its guest Dr. William Engelbach of St. Louis who gave a lantern slide demonstration on the "Diagnosis of the Ductless Gland Disorders." Seventy-five physicians from the surrounding counties of Davies, Gibson, Sullivan, and Lawrence and Wabash, Illinois, beside several from Evansville, were present. Dinner was served by the Ladies' Auxiliary of the Y.

D. H. RICHARDS, Secy.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

POLLEN DIAGNOSTICS-LEDERLE.—Liquids obtained by extracting the dried pollen of plants with a liquid consisting of 67 percent glycerin and 33 percent saturated solution of sodium chlorid. Pollen diagnostics-Lederle are marketed in capillary tubes containing 0.01 Cc. of a liquid, representing 100 pollen units. Pollen diagnostics-Lederle are employed in the diagnosis of hay-fever (Pollenosis). (See New and Nonofficial Remedies, 1922, p. 232). The following preparations have been accepted:

Arizona Ash Diagnostic-Lederle: Prepared from the pollen of Arizona ash (*Fraxinus toumeyi*).

Arizona Walnut Diagnostic-Lederle: Prepared from the pollen of Arizona walnut (*Juglans major*).

Black Walnut Diagnostic-Lederle: Prepared from the pollen of black walnut (*Juglans nigra*).

Careless Weed Diagnostic-Lederle: Prepared from the pollen of careless weed (*Amaranthus palmeri*).

Cottonwood Diagnostic-Lederle: Prepared from the pollen of cottonwood (*Populus macdougalii*).

June Grass Diagnostic-Lederle: Prepared from the pollen of June grass (*Poa pratensis*).

Ragweed Diagnostic-Lederle: Prepared from the pollen of ragweed (*Ambrosia elatior*).

Red Top Diagnostic-Lederle: Prepared from the pollen of red top (*Agrostis palustris*).

Sage Brush Diagnostic-Lederle: Prepared from the pollen of sage brush (*Artemisia tridentata*).

Shad Scale Diagnostic-Lederle: Prepared from the pollen of shad scale (*Atriplex canescens*).

Sheep Sorel Diagnostic-Lederle: Prepared from the pollen of sheep sorel (*Rumex acetosella*).

Slender Ragweed Diagnostic-Lederle: Prepared from the pollen of slender ragweed (*Fransevia tenuifolia*).

Sweet Vernal Grass Diagnostic-Lederle: Prepared from the pollen of sweet vernal grass (*Anthoxanthum odoratum*).

Timothy Diagnostic-Lederle: Prepared from the pollen of timothy (*Phleum pratense*).

Lederle Antitoxin Laboratories, New York.—(Jour. A. M. A., June 10, 1922, p. 1803).

NEUTRAL ACRIFLAVINE-HEYL.—The base of 3:6 diamino-10 methylchloracridine, containing about 1.5 percent of sodium chloride as a stabilizer. The actions, uses and dosage of neutral acriflavine-Heyl are essentially the same as those of acriflavine (see Acriflavine and Proffavine, New and Nonofficial Remedies, 1922, p. 25). Neutral Acriflavine-Heyl is also supplied in the following forms:

Neutral Acriflavine-Heyl Tablets 0.1 Gm.,

Neutral Acriflavine-Heyl Throat Tablets,

Neutral Acriflavine-Heyl "Pro Injections" 0.5 Gm. vials,

Neutral Acriflavine-Heyl "Pro Injections" 1.0 Gm. vials.

National Aniline and Chemical Co., New York.—(Jour. A. M. A., June 17, 1922, p. 1893).

LUMINAL TABLETS $\frac{1}{4}$ GRAIN.—Each tablet contains luminal, $\frac{1}{4}$ grain. For a discussion of the actions, uses and dosage of luminal, see New and Nonofficial Remedies, 1922, p. 60.

VEN STERILE SOLUTION PROCAIN 0.5 PERCENT.—Each ampule contains 1 Cc. of a 0.5 percent solution of procain-N. N. R. (New and Nonofficial Remedies, 1922, p. 35). Intra Products Co., Denver.

VEN STERILE SOLUTION PROCAIN 2 PERCENT.—Each ampule contains 2 Cc. of a 2 percent solution of procain-N. N. R. (New and Nonofficial Remedies, 1922, p. 35). Intra Products Co., Denver.

VEN STERILE SOLUTION PROCAIN 2 PERCENT.—Each ampule contains 5 Cc. of a 5 percent solution of procain-N. N. R. (New and Nonofficial Remedies, 1922, p. 35). Intra Products Co., Denver.—(Jour. A. M. A., June 17, 1922, p. 1893).

DIPHTHERIA ANTITOXIN (CONCENTRATED ANTIDIPHTHERIC SERUM GLOBULIN)-P. D. & Co.—Marketed in piston syringe containers, containing, respectively, 1,000, 3,000, 5,000, 10,000 and 20,000 units. Parke, Davis & Co., Detroit.

ANTITETANIC SERUM (SEE NEW AND NONOFFICIAL REMEDIES, 1922, P. 282).—Also marketed in piston syringe containers, containing, respectively, 3,000, 5,000, and 10,000 units. Parke, Davis & Co., Detroit.

ANTIGONOCOCCIC SERUM (SEE NEW AND NONOFFICIAL REMEDIES, 1922, P. 285).—Also marketed in bulbs, containing 12 Cc. Parke, Davis & Co., Detroit.

ANTISTREPTOCOCCIC SERUM-P. D. & Co. (SEE NEW AND NONOFFICIAL REMEDIES, 1922, P. 289).—Also marketed in piston syringe containers, containing, respectively, 20 Cc. and 50 Cc. Parke, Davis & Co., Detroit.—(Jour. A. M. A., June 17, 1922, p. 1893).

PROPAGANDA FOR REFORM

EVANS' CANCER CURE.—Dr. R. D. Evans of Brandon, Manitoba, sells a "positive cure for cancer". The price is "one hundred dollars in advance"! The victim who parts with \$100.00 for this cruel and worthless fake is told to shave a patch about the size of a silver dollar on the crown of the head. The "cure" is applied to this spot. This is for the treatment of internal cancer. "For 'external cancer' the discovery is applied on the spot." From an analysis made in the A. M. A. Chemical Laboratory, it was evident that Evans' Cancer Cure is essentially a mixture of 1 part of a fatty substance (such as lard) and 5 parts of dried ferrous sulphate.—(Jour. A. M. A., June 3, 1922, p. 1739).

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act:

Beil's New Nerve Tablets (Beil Mfg. Co.), consisting essentially of aloin, zinc phosphid, nux vomica extractives, resin, a laxative plant drug, magnesium and iron salts.

Diemer's Prescription for Gonorrhea and Gleet

(Dr. F. W. Diemer Medicine Co.), consisting of pills which contain Epsom salt, calcium sulphid, ferrous sulphate and oil of cubeb, and tablets for external use, containing boric acid, zinc sulphate and hydрастин.

Diemer's Dyspepsia Tablets (Dr. F. W. Diemer Medicine Co.), consisting chiefly of baking soda, a laxative drug and ipecac alkaloids.

Diemer's Hot Toddy (Dr. F. W. Diemer Medicine Co.), tablets containing milk sugar, baking soda, a laxative plant drug and small amounts of ginger and red pepper.

Diemer's Kidney and Bladder Tablets (Dr. F. W. Diemer Medicine Co.), consisting chiefly of baking soda, saltpeter and a laxative plant drug.

Diemer's Treatment for Piles (Dr. F. W. Diemer Medicine Co.), suppositories containing cacao butter, borax, alum and tannin-bearing plant material.

Diemer's Antiseptic Female Suppositories (Dr. F. W. Diemer Medicine Co.), suppositories containing borax, alum and tannin-bearing plant material.

Diemer's Rheumatic Remedy (Dr. F. W. Diemer Medicine Co.), containing chiefly acetanilid, baking soda and a laxative plant drug.

Diemer's Pennyroyal and Tansy Compound (Dr. F. W. Diemer Medicine Co.), tablets containing chiefly plant material, including aloes and red pepper, with saltpeter and sand.

Diemer's Preparation for Specific Blood Poison (Dr. F. W. Diemer Medicine Co.), containing, chiefly, calcium carbonate, ferric oxid, potassium iodid and small amounts of arsenic and mercury.

Diemer's Laxative Grip-Malarime (Dr. F. W. Diemer Medicine Co.), consisting of acetanilid, baking soda, aloes and red pepper.

Manhood Tablets (Hollander-Koshland Co.), containing damiana, strychnin and zinc phosphid.

Patten's Lightning Salve (John H. Patten), consisting of camphor, turpentine, soap, resin, fallow-beeswax and petrodatum.—(Jour. A. M. A., June 3, 1922, p. 1740).

SALICYLATES "NATURAL" AND "SYNTHETIC".—The Wm. S. Merrell Company rehashed the definitely refuted claim that "synthetic" salicylic acid is inferior to the "natural" kind. The Merrell Company suggests that, to avoid the effects of synthetic salicylic acid, physicians should specify "natural" and "Merrell" in writing prescriptions for sodium salicylate or any of the other salicylates. About ten years ago, the Council on Pharmacy and Chemistry instituted a thorough investigation of the asserted superiority of natural salicylic acid and salicylates over the ordinary or synthetic kind. This investigation afforded conclusive proof that the claim—based on a mixture of mysticism, commercial exploitation, misinterpretation and tradition—is without foundation. Nevertheless, the Merrell Company attempts to induce the medical profession to perpetuate this exploded fallacy and to specify the Merrell product, which costs twenty-four times as much as the synthetic sodium salicylate of U. S. P. quality.—(Jour. A. M. A., June 3, 1922, p. 1742).

MORE MISBRANDED NOSTRUms.—The following have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act:

Ammonol Tablets (Ammonol Chemical Co.), containing acetanilid, ammonium carbonate, sodium bi-carbonate and sodium phosphate.

Johnson's Female Regntator (Logan Pharmacal Co. and the France and New York Medicine Co.), consisting of pills containing extracts of vegetable drugs.

Fosfo-Ferrogen De Johnson, containing caffeine and compounds of iron, quinin, strychnin, arsenic and calcium.

Bick's Nerve Tonic (Palestine Drug Co.), consisting of two preparations, one a brown tablet, contain-

ing phosphorus, phosphates, zinc and iron and the other a pellet containing phosphate, iron and strychnin.

Vitalo (Allan-Pfeiffer Chemical Co.), containing vegetable extractive matter including damiana, nux vomica, sugar, alcohol and water.—(Jour. A. M. A., June 10, 1922, p. 1832).

THE INTRAVENOUS USE OF ACACIA.—It is now generally accepted that acacia has a limited and uncertain usefulness. The intravenous use of acacia is a recent therapeutic procedure and apparently sufficient time has not elapsed for the thorough appraisal of its use as a therapeutic remedy. Bearing in mind the accidents from the use of acacia that have been reported, the lack of agreement as to its beneficial effects, among surgeons who have tried it, the experimental evidence that has been reported as to its deleterious effects and the paucity of data indicating its clinical usefulness, conservative practitioners will still withhold their verdict. Moreover, the questions of intravenous therapy, which are involved in any discussion on the use of acacia in shock, hemorrhage and allied conditions, are an important and serious complicating consideration.—(Jour. A. M. A., June 17, 1922, p. 1897).

MORE MISBRANDED NOSTRUms.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act:

East India Capsules (Hollander-Koshland Co.), containing sulphurated vegetable oil, copaiba and oils of cinnamon and saantal, and claimed to be an effective treatment for gonorrhea.

Zerbst's Cough Sirup (The Zerbst Pharmaceutical Co.), a sirupy liquid containing alcohol, water, sugar, chloroform, licorice and other plant principles, and small amounts of tartar emetic, morphin, hyoscyamin and a magnesium salt.

Cummings' Pill-Hass (F. P. Cummings Co.), containing copaiba, volatile oils, vegetable extractives and a salieylie acid compound and represented as a remedy for gonorrhea, gleet, etc.

Craemer's Calenlus Corrective (Wm. Craemer Medicine Co.), an alkaline watery solution, composed essentially of potassium, sodium, ammonium, phosphate, chlorid, citrate, salicylate and a small amount of saccharin and represented as a remedy for gallstones, stones in the kidney, etc.

Salax Compound (Salax Wafer Co.), consisting chiefly of a mixture of sodium sulphate, baking soda, sodium acid phosphate, with smaller amounts of common salt and washing soda. It was falsely claimed to be derived from Salax water, a mineral water at Excelsior Springs.

K K K So So So (K K K Medicine Co.), a dark brown water-alcohol solution, consisting chiefly of sugar and glucose with a small amount of creosote, methyl salicylate, red pepper, oil of sassafras and plant principles.

K K K Pectns Batn (K K K Medicine Co.), a water-alcohol solution, consisting chiefly of sugar, small amounts of ammonium chlorid, benzoic acid, tartar emetic, saccharin, bitter plant principles, traces of camphor and oils of anise and eucalyptol.

K K K Tonie (K K K Medicine Co.), a water-alcohol solution containing sugar, small amounts of emodin-bearing (laxative) drugs, bitter plant extractives, pepsin and traces of cinchona alkaloids, hydrochloric acid and oils of cloves and cassia.

K K K Laxative Perio (K K K Medicine Co.), a watery alcohol solution of sugar, sodium phosphate, laxative drugs and small amounts of plant principles, saccharin and oils of orange and anise.

Paradise Oil (California Good Health Co.), consisting of a combination of sulphurated linseed oil and turpentine.

(Continued on Advertising p. xx)



"Why Take a Chance, When You May Be Sure, in Treating Thyroid Insufficiency?"

The most recent method of treating Thyroid Insufficiency is to administer two-grain doses of Standardized Thyroids t. i. d. until the usual symptoms of hyperthyroidism appear; then give small doses, (1-10 or 1-4 grain) to maintain balance.

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BALTIMORE

TRUTH ABOUT MEDICINES

(Continued from page 250.)

Tarina Carbolized Salve (California Good Health Co.), composed essentially of petrolatum with small amounts of phenol and oil of tar.—(*Jour. A. M. A.*, June 17, 1922, p. 1912).

VITA ZEST NOT ADMITTED TO N. N. R.—The Council on Pharmacy and Chemistry reports that Vita Zest (Vita Zest Co., Inc., New York City,) comes in the form of capsules and is stated to be composed of 83 1/3 percent of "highly concentrated vitamin extracts (Fat Soluble A, Water Soluble B and Water Soluble C)". The amount of material in each capsule is not declared nor is any information offered to show that the amount (or potency) of the three vitamins, the claims advanced for it are such that is determined or controlled. Even if it were shown that the product contains appreciable amounts of vitamins, the claims advanced for it are such that most enthusiastic advocates of the administration of vitamin would scoff at them. The Council declared Vita Zest inadmissible to New and Nonofficial Remedies, because (1) its composition is indefinite; (2) it is exploited under unwarranted therapeutic claims and in a manner which tends to its indiscriminate use, and (3) because the name suggests its haphazard use as a general tonic.—(*Jour. A. M. A.*, June 17, 1922, p. 1912).

LAXATIVES.—Untoward Effects of Laxatives.—Lately a number of instances of cutaneous manifestations due to the use of phenolphthalein as a laxative drug have been brought to the attention of physicians, particularly by dermatologists. Now Underhill and Erico have demonstrated that when magnesium sulphate, sodium sulphate and potassium and sodium tartrate are administered experimentally in doses capable of producing diarrhea, a distinct concentration of the blood may take place. The fact that purgatives exert a definite influence, in the direction of concentrating the blood, indicates that care should be exercised in the administration of purgatives in disease conditions, especially in those conditions known to be responsible for concentrated blood. Blood concentrated to some extent, and yet not sufficiently concentrated to be dangerous in itself, may reach a dangerous concentration by the added influence of the purgative.—(*Jour. A. M. A.*, June 24, 1922, p. 1964).



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Owned, Published and Controlled by the Indiana State Medical Association

ISSUED MONTHLY under the Direction of the Council

VOLUME XV
NUMBER 8

FORT WAYNE, IND., AUGUST 15, 1922

Per Year, \$3.00
Single Copy, 30 Cents

CONTENTS

	Page
ORIGINAL ARTICLES	
The Clinical History of Tumors of the Face and Jaws as a Guide to Their Correct Diagnosis and Proper Treatment. W. D. Gatch, Indianapolis	251
Treatment of Compound Fractures. E. B. Mumford, Indianapolis	255
Local Anesthesia as a Supplement to General Narcosis. M. N. Hadley, Indianapolis	259
Concussion of the Brain and Fracture of the Skull. R. E. Whitehead, Indianapolis	264
Hypertrophic Ileocecal Tuberculosis. Walter H. Baker, and M. W. Lyon, Jr., South Bend	271
EDITORIALS	
The Death of Dr. Wynn	277
Hay Fever	277
Support the Council on Pharmacy and Chemistry	278
"Le Caducee"	278
Editorial Notes	279
MISCELLANEOUS	
Deaths	283
News Notes and Personals	284
Correspondence	288
Truth About Medicines	288
SOCIETY PROCEEDINGS	
Councilor's Membership Contest	287
Indiana State Medical Association	287
Hamilton County	288

Next Annual Session, Muncie, September 27, 28, 29, 1922. List of Officers and Committees on Adv. Page 2. Entered as Second Class Matter, January 20, 1908, at the Postoffice at Fort Wayne, Indiana, under Act of Congress of March 3, 1879. Accepted for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized October 18, 1918.

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DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION

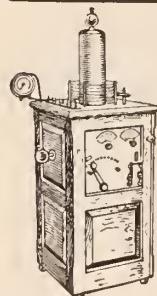
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THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF INDIANA

ISSUED MONTHLY under Direction of the Council

ALBERT E. BULSON, Jr., B.S., M.D., Editor and Manager

OFFICE OF PUBLICATION: 406 West Berry Street, FORT WAYNE, INDIANA

VOLUME XV

AUGUST 15, 1922

Number 8

ORIGINAL ARTICLES

THE CLINICAL HISTORY OF TUMORS OF THE FACE AND JAWS AS A GUIDE TO THEIR CORRECT DIAGNOSIS AND PROPER TREATMENT*

W. D. GATCH, M.D.

INDIANAPOLIS

In the treatment of a tumor, benign or malignant, of any region it is essential that we have an accurate knowledge of the life history of the lesion. The microscopic picture itself is often misleading. To outline the proper treatment and to give an accurate prognosis the surgeon must know the clinical history of a large number of similar tumors in the same situation and at various periods of life. For example, squamous cell cancers of the lower lip, cervix uteri, of the tongue and of the skin present almost identical microscopic pictures, yet the prognosis is vastly different. Furthermore, as Bloodgood has pointed out, the criteria whereby individual pathologists judge the malignancy of a tumor vary greatly. As a result, the percentage of cures obtained by any surgeon will depend largely upon his pathologist. To illustrate this point, Bloodgood studied the ultimate results in over one hundred and fifty cases of chronic cystic mastitis, a condition often regarded as cancer or potential cancer. In this series, every possible type of operation, from partial excision of the lesion to the radical operation for cancer of the breast had been done. Not a single patient, however, had developed cancer or had died of cancer. It is evident that if this condition is called cancer, the percentage of cures obtained for cancer of the breast will be high. On final analysis, our knowledge of the malignancy of a growth and the results to be expected from various methods of treatment is based upon accumulated clinical experience. The very opinion formed from the study of a microscopic picture should be based upon the same ground—a fact too often ignored. The tendency to regard a given microscopic picture apart from the other facts of the case as a safe guide to prog-

nosis and treatment is productive of much harm. It leads either to unnecessarily mutilating operations or to neglect of operation in curable cases. We should plan our treatment and found our prognosis not alone upon a microscopic section but upon such facts as the situation of the tumor, the rapidity of its growth, the degree of its fixation, and above all, upon known results obtained under nearly identical conditions. A given cancer must be studied, not merely in the light of cancer in general, but in the light of cancer in the particular situation involved. The microscopic study furnishes only one piece, and that often a very unsatisfactory piece, of the entire evidence.

Furthermore, pathologists competent to form a safe opinion from the microscopic examination of a piece of tissue, are by no means common, and an incompetent pathologist is dangerous. Obviously it is not always possible to send a piece of tissue to a distant laboratory for examination, for the diagnosis, to be of use, must often be made while the patient is on the operating table.

From the foregoing consideration it follows that we must have other guidance to diagnosis and treatment than the microscope. This instrument unwisely relied upon is often the cause of disastrous mistakes. This paper is intended to illustrate in a general way, and in a particular field, how such guidance may be obtained—also that it is fairly certain and reliable, and easily to be obtained, by taking a careful history of the origin, duration and growth of the lesion, and by careful observation of its own characteristics.

The face and jaws give origin to a great variety of neoplasms arising from the orbital structures, the skin and mucous membrane, the teeth, the gums and the bones. It is not my purpose to attempt an exhaustive discussion of these tumors. This would require an entire treatise. I shall attempt to illustrate the differential diagnosis and the surgical treatment of these conditions in the light of the facts we have just discussed. For our purpose, the following classification of tumors of the face and jaws will be sufficient:

A. From the skin and mucous membrane arise

(*) Presented before the Section on Surgery of the Indiana State Medical Association, Indianapolis session, September, 1921.

two types of cancer, the squamous celled (carcinoma spino-cellulare) and the basal celled (carcinoma baso-cellulare) or rodent ulcer. Also various nevi, most common of which is the hemangioma, and finally, any tumor of the skin which may occur anywhere.

B. The common tumors of the parotid gland are the mixed tumors, cancer and sarcoma.

C. From the teeth arise the odontomes proper, dentigerous cysts, and adamantine epithelomata.

D. From the gums arise cancer, sarcoma and epulis, as well as benign hypertrophies of the epithelium due to chronic irritation and infection.

E. From the jaw may arise sarcoma, osteoma and bone cyst.

This is not intended to represent a systematic or scientific classification, but merely to serve as a convenient outline to meet the purposes of this paper. The lesions enumerated vary in malignancy from the most rapidly fatal and destructive tumors to those which are perfectly benign. In the differential diagnosis of a given tumor, the condition must first be distinguished from various inflammatory processes such as tuberculosis, syphilis, actinomycosis and pyogenic lesions. This is not always easy, but the scope of this paper limits us to a consideration of the differential diagnosis of members of the neoplastic group among themselves. In a general way it may be said of these non-neoplastic lesions that they display early ulceration or sinus formation in a way not common with tumors, and that they are attended with more constitutional disturbance than the latter.

A. Let us first consider the tumors arising from the skin of the face and the mucosa of the lips, alveolar processes and cheeks. The moles, including the common hemangioma or birthmark will obviously present but little difficulty in diagnosis. If any of these begin to increase in size, to become hard or ulcerate, it is probable that a sarcoma has developed, and such changes should be accepted as a positive indication for their thorough and early extirpation with the knife, or better, the cautery. Cancer arising in this situation differs in history from the moles in that while the latter are commonly congenital, cancer is a lesion which appears later in life. While the moles are obviously sub-epidermal in origin, the cancer, with the rare exception of tumors starting in sweat or sebaceous glands, is epidermal in origin, starting on the skin as an area of roughening or a small area covered with crusts, and on the mucosa as a shallow ulcer with a slightly indurated base. The location of the cancer is of the greatest importance in judging its type and relative malignancy. The old clinical rule that cancer arising above the line of the lower lip is relatively

benign, whereas that arising below this level is malignant holds good, and depends upon the fact that cancers in the former situation are nearly always of the basal cell or rodent ulcer type, whereas those arising in the latter situation are nearly always of the squamous cell type. The familiar appearance of the rodent ulcer, with its elevated crater-like border of normal skin, and indurated grayish, encrusted or weeping base, is so characteristic that it can hardly be mistaken for any other condition. The squamous cell cancer of the lip or mouth is practically always an elevated, more or less fungating and friable tumor, which bleeds easily.

The above given, distinct and easily recognized characteristics make the diagnosis of these tumors easy. The microscopic study merely makes a certainty doubly sure. What we have stated concerning accumulated clinical experience, as the only basis for the proper treatment of any tumor, is admirably illustrated in this case.

Basal celled cancer practically never spreads to the regional lymphatic glands. It is essentially a local process and although it may produce the most extreme mutilation of the face, it is nearly always, even in its more advanced stages, curable, either by thorough local removal or by x-ray or radium treatment. That these rodent ulcers be allowed to progress until they have destroyed perhaps the orbital contents and even encroached upon the cranial cavity is a reproach to our civilization. They are best treated in their early stages by radium, which if thoroughly applied will cure them with practically no deformity. However, when they have advanced until the eyeball or the cranial bones are encroached upon, they may require a judicious combination of the knife, the cautery and radium to effect a cure. When the nose is the site of a rodent ulcer of large size, the best treatment is the amputation of the nose with or without rhinoplasty according to circumstances. It is the writer's opinion that these patients attract less attention when they conceal the loss of the nose by a simple black pad than when they have been provided with an artificial nose or undergone a rhinoplasty, no matter how excellent the rhinoplasty.

Squamous celled cancer in my experience does not yield very readily to radium treatment. It requires operative removal of the local lesion together with all lymphatics which may possibly be involved and which are accessible to removal. The great majority of squamous celled cancers of the face occupy the lower lip. In this situation they are readily curable by extirpation carried out in the relatively early stages of the growth. Even when the growth is far advanced, has become fixed to the jaw, the outlook is by no means hopeless, as the case reports

I shall present will show. Squamous celled cancer of the cheek or alveolar process is a much more dangerous lesion than the same type of growth on the lower lip. Still, it is in some cases curable. With these tumors, as with rodent ulcer, it is disgraceful that operation should be postponed until it becomes extremely radical and mutilating. However, the surgeon should bear in mind that no matter how mutilating his operation may be, it will not be as mutilating as the growth itself, let alone. Furthermore, that the extensive operations required do not produce anything like the discomfort to the patient which we might imagine. A discussion of the technique for the removal of advanced carcinoma of the lip, cheek or gum is in order here. In this situation, the general law which holds good for cancer anywhere is that the growth must be widely circumscribed and totally removed together with all its ramifications. To get successful results in these cases, it is necessary to perform the operation totally regardless of the resultant cosmetic effect. Once the lesion has been removed, it is time to study how the appearance and comfort of the patient can be improved. Another principle which must not be lost sight of is that in the course of the operation, cancer cells must not be implanted in the wound. This can be prevented by a preliminary thorough cauterization of the growth. In fact, as has been pointed out by many authorities, many of the bad results have been due to this cause. Another truth to be borne in mind is that the older the patient, the relatively better the prognosis so far as cure of the cancer is concerned. In extremely old people these cancers are rather surprisingly benign in character.

I wish to say a word in regard to the repair of the extensive defects which result from the radical removal of these tumors. It is possible in almost every case by the bringing down of flaps from the upper lip and cheek or up from the neck to close the defect. We should not lose sight, however, of the fact that a pair of lips which present a fairly normal appearance may be functionally almost useless. The mouth is surrounded by a sphincter muscle and the innervation and integrity of this should be preserved. The mouth which is of the greatest functional use to the patient will be one which he can move with the greatest freedom in phonation and mastication. It has been the writer's experience that these patients may have a better functional result when a portion of the lower jaw has been removed. When this is not done, the extensive scar may contract so as to fix the jaws in an immovable position. While bone-grafting to restore the contour of the jaw may be eminently proper after injuries or in young people, it would seem to have a very limited use in the cases we are considering.

Tumors of the parotid gland are either very benign or very malignant, easily curable or hopeless. The most typical tumor here is the mixed tumor, regarded by some as an endothelioma, which under the microscope shows an extremely complex structure, hyaline material, cartilage, epithelium and fibrous tissue. It has been suggested that this conglomeration of tissues results from an invasion of the fundament of the lower jaw by the developing parotid gland in embryonic life. The mixed tumor forms a growth of extremely long duration, nodular, not attached to surrounding structures, at times reaching an extreme size, but producing symptoms only by pressure or through its weight. The only problem in its removal is the avoidance of the branches of the facial nerve. I have on several occasions, when operating upon early tumors of this kind, shelled out the growth from within its capsule, a procedure which enables one to recognize and avoid the nerve. However, it is not a procedure to be recommended without reservations, because in one of my cases it was followed by a recurrence of the tumor. Sarcoma and cancer of the parotid gland produce a brawny induration and fixation of the skin, extreme pain and facial paralysis. The location of the growth, these features, together with the absence of infection are sufficient to render the diagnosis easy. Operation is out of the question. Radium may be tried.

For the sake of simplicity of treatment let us consider in one group tumors of the gums, teeth and jaws. From these structures arise a remarkable variety of tumors, the differential diagnosis of which may require an x-ray picture in addition to a good clinical history and a careful visual and tactile examination. These means, readily available to everyone, are in nearly every case sufficient to establish the diagnosis.

I have thought that I can present this subject most clearly by means of the following outline:

TUMORS OF THE GUMS

1. The benign epulis—a knobby tumor arising about the teeth—of variable density—slow growth—may loosen the teeth—covered with mucous membrane except when subjected to trauma.

2. Cancer—usually arises in the upper jaw—always somewhat fungating and ulcerated—bleeds easily—spreads rapidly.

3. Chronic ulcer due to ulceration and infection usually on cheek about carious teeth—may resemble cancer but does not spread far from the point of ulceration.

TUMORS OF THE TEETH

1. Odontomes—used in sense of a tumor of a tooth. Hard tumor inside the alveolar process—usually associated with an unerupted tooth—x-ray clears diagnosis.

2. Dentigerous cyst—tumor inside alveolar process of jaw—if large gives parchment-like crackling on palpation. Has fibrous capsule, x-ray usually shows it to contain an unerupted tooth.

3. Adamantine epithelioma — large, slow growing tumor with cysts containing black fluid —may replace entire jaw. Usually in mandible. Rare.

TUMORS OF THE JAW

1. Bone cysts—rare—x-ray shows no tooth inside cyst. Cyst has no fibrous capsule.

2. Sarcoma-periosteal or medullary in origin, of rapid growth. Destroys bone and quickly forms a soft, friable, bleeding mass on reaching the surface.

3. Sarcoma — medullary — giant cell—slow growing relatively limited to medullary cavity of bone. On examination has a gelatinous consistency and a rusty color. Lies in a well defined space in the bone.

We may lay down the following rules as a guide to treatment:

1. The only tumor of this region which requires radical removal is cancer. Such removal is best accomplished with the cautery or perhaps by electro-coagulation. Periosteal or medullary sarcoma is either so terribly malignant that no operation is of avail, or else so benign (medullary giant-cell type) that it is cured by a thorough local removal. (The latter type is quite easily recognizable on exploratory incision. The malignant sarcomas are best treated by radium.

2. The odontomes require only removal—the dentigerous and bone cysts require only opening and curettage with the least possible damage to the jaw. Adamantine epithelioma requires removal of the affected portion of the jaw.

3. Epulis requires only thorough local removal—if it recurs it remains local. The limits of this paper have rendered the above dogmatic presentation of the subject necessary. However, I believe that the facts stated conform to the teaching of our best authorities on surgical pathology. I have arranged them in this manner to support my main contention that evidence obtained from the clinical history and from ordinary gross examination of tumors, viewed in the light of accumulated clinical experience in similar cases, form a safe guide to diagnosis and treatment, and that such evidence is of at least as great scientific value as is that from the study of a microscopic picture. This is not to be interpreted as an effort to belittle the use of the examination of tissue with the microscope. It is instead an effort to make such examination more intelligent and better related to the other evidence in each case.

DISCUSSION

DR. T. C. KENNEDY (Indianapolis): I have had many conversations with Dr. Gatch about

the treatment of squamous-cell epithelioma, and while he believes in the efficacy of radium in the basal-cell epithelioma, he is still partial to surgery in the squamous cell type.

A large percentage of the squamous cell epithelioma will yield to radium and every case should be so treated before resorting to surgery. If radium fails, which it rarely does, it is then wise to resort to surgery, but not before.

DR. ALBERT COLE (Indianapolis): We have a good many of these tumors of the face sent to us for diagnosis and I want to state that it is not as easy as Dr. Gatch has implied, at least not in our experience. We are often very much in doubt as to what we have. I remember one case several years ago where we had apparently a bone cyst of the lower jaw. For some reason the patient was put upon specific treatment and the condition cleared up in a short time. We have had others of a similar type.

I am glad to hear Dr. Gatch make the statement he did regarding the pathologists. We are always pleased to know that men in our diagnostic lines of work make mistakes as well as the roentgenologists.

DR. EDWIN N. KIME (Indianapolis): I would like to cite a case which has a bearing upon this idea of microscopical diagnosis. This was a woman, sixty years of age, who for two years had a tender, cauliflower-like mass on the upper jaw. It started behind the median incisor tooth. She was referred to me by one of the dentists in town. I would not attempt to give the history in detail because it would take too long, but all examinations were negative, negative each time for cancer. I made an examination myself and examination was also made by three pathologists. Each of them stated that it was negative, or practically so. It showed merely a hyperplasia of the epithelium of the gum. The only thing that touched that case in the form of treatment was the x-ray, and that seemed to hold it down. It decreased a little in size. The application of the actual cautery helped a little, but the x-ray did the most good. Examination by a nose and throat man revealed there was new granulation tissue in the maxillary air sinuses. The patient went back home, tried treatment by the x-ray, and the last I heard of the case was that the eyeballs began to push out and that she was dying of undoubtedly carcinoma of the antrum. In that instance our microscopical findings did not help us. They really led us astray. We thought we had a benign tumor when it was really a malignant tumor. However, a negative microscopic diagnosis means that it is negative; it does not have any other value. Just as a negative Wassermann means that you have not determined that the patient has syphilis. I do not feel the microscopical examination was dependable in this case, simply because none of the three sections

were obtained from the heart of the growth, which was primary in the nose or antrum. The surface tumor was in itself benign, being an irritative hyperplasia of the epithelium of the oral mucosa. The association of the first visible manifestation of the growth with the oral end of the anterior palatine foramen should be of some interest from a diagnostic standpoint.

DR. W. U. KENNEDY (Newcastle): It has been my fortune in the past few years to have had considerable experience in these flat-cell malignant growths of the face. I am a firm believer in the use of radium, a believer in the use of the x-ray, but not as a preliminary except in small and very early types of lesion. Whenever there is involvement of substantial structures I believe in early and wide incision, a block resection that eliminates the diseased tissues, and then the application of large doses of radium for a short period, or the intensive application of the x-ray. But we must not lose sight of the permanent necessity of early and wide resection followed by the use of radium or the ray. I believe in this way we will get the greatest percentage of success in our cases.

DR. H. K. BONN (Indianapolis): Since the first of the year I have had two cases of carcinoma of the lower lip, one in a man of 74, the other in a man of 48 years of age. The older gentleman is sure that this growth on his lip has been present for at least five years, while the carcinoma has been present for three years in the case of the younger man.

The man of 74 years of age declined to submit to a block dissection of the neck. There were no palpable glands, hence a wide local removal of the growth was done.

A wide local removal, preceded by a block dissection of the palpable glands of the neck, was done in the case of the man aged 48 years. Radium by Dr. Kennedy was begun a few days after the operation and continued after the patient left the hospital. The patient of 74 years of age declined to permit the use of radium. Both specimens, including the glands of the one case, were examined by two pathologists. The lip specimens showed carcinoma, squamous-cell type, but the removed glands failed to show malignancy and were reported as inflammatory. These two cases may perhaps, in view of the fact of the long residence of the growths, show that there actually exists a degree of variance in carcinoma.

The cosmetic effect, even though the local excision was carried wide of the edges of the growth, has been satisfactory to both patients, who have declined a further plastic operation.

Hence in some cases, a primary or secondary plastic is not necessary, at least from the patient's standpoint. To date, there has not been a recurrence in either case.

DR. W. D. GATCH (closing): Cancer of the lower lip is easy to cure, compared with cancer in other parts of the body.

I want to emphasize the point of the age of the patient. These growths in people of 70 and 80 are surprisingly benign while they are relatively malignant in younger people.

I do not want Dr. Cole to understand me as saying that the differential diagnosis of these lesions is always easy. The point I want to make is that it is possible to formulate a safe plan of treatment in every case, though in a great majority of cases there are difficulties of exact diagnosis. The operation I have used on these advanced cases of cancer of the lip or cheek is extensive. I think the evidence goes to show that when once cancer has involved the glands the chances for cure are extremely remote.

As to the use of radium. In the advanced cases you have the combined use of surgery and radium. In squamous-cell carcinoma of the mouth I have failed to get very good results from radium, and I still hold to the idea that these should be treated surgically. I believe there is great hope in the so-called electro-coagulation. It is said you can thus excise the whole tongue, bloodlessly, and without danger of spreading the growth.

TREATMENT OF COMPOUND FRACTURES*

E. B. MUMFORD, M.D.

INDIANAPOLIS

Compound fractures have always been considered as more serious lesions than simple fractures on account of the possibility of infection which might lead to an extensive osteomyelitis or to a more grave septicemia. Just what percent of compound fractures have become infected is rather difficult to estimate, as it will vary greatly with the extent of the laceration of the soft parts, the amount of contamination, the environments of the patient and the skill of the surgeon. However, infection has, in the past, occurred so frequently in this type of wound that its possibility dominates the whole treatment of the case.

Before the introduction of antiseptics practically all compound fractures became infected and amputation of the extremity was the usual end result in order to save the life of the patient. Following the introduction of antiseptics since the days of Pasteur and Lister not only have infections become of less frequency, but amputations are rarely done. The basic principles however have not changed, the only variation being in the type of the antiseptic used in the attempt to make and keep the wound clean.

*Presented before the General Meeting of the Indiana State Medical Association, Indianapolis session, September, 1921.

A review of the text books gives almost universally two cardinal principles in the treatment of compound fractures—first, to thoroughly cleanse the wound by irrigation, swabbing, etc., and secondly, to leave in drains to take care of any infection which might occur. Scudder in his edition of 1905 of "Fractures" states that compound fractures should be "treated on the presumption that every open fracture is infected." After outlining a careful preparation of the wound in which irrigating and swabbing of the "moderately enlarged" wound is the first step, he then advocated "leaving the wound open enough to receive several temporary gauze wicks for drainage during the first few days. Counter openings may be needed if one is not sure of the aseptic condition of the wound. They do no harm and may prove safety valves against latent infection."

Stimson in his 1917 edition of "Fractures and Dislocations" states that in those fractures due to direct violence "an uncomplicated healing cannot be expected," while those due to indirect violence in which the wound is made from within outward, one may expect healing within a few days. This difference in course of the two types of wounds he thinks "may be found in the lowered vitality of the bruised muscles, in the products of metabolism, or in their lowered power of resistance." In the less severe wounds he uses drains in only the exceptional case, but in the more severe type—as those resulting from direct violence, he states that "drains of rubber or gauze are to be inserted." Rose and Carless also advocate the use of drains.

The quotations from these three authorities represent in a general way the universal teachings in regard to compound fractures. As may be seen, the whole line of treatments is based upon the theory that all compound fractures are unclean and that in the majority of cases as a result of the contamination which occurred at the time of the accident, a subsequent infection will arise.

That all compound fractures are to be considered as contaminated with pathogenic bacteria will be conceded. But it is the opinion of the writer that this primary infection can be controlled and that if after a thorough cleansing of the wound, any *subsequent infection arises, it is not due to the primary contamination, but to a later one*, occasioned through drains, leaving the wound open, etc. Thus an open fracture which is to be considered infected can be so cleaned as to be considered potentially clean and be treated as a clean wound.

The character and extent of the wound of the skin will vary from a small puncture wound to a large lacerated, contused area—but the treatment will be the same. In those cases in which the external wound is occasioned by a force acting from within out, which Stimson terms an

indirect force, the lesion in the skin is made by the sharp cutting edge of the bone. The wound may be small or large but with little bruising of the skin, the edges being clean cut and smooth. If the compound features are produced by a force acting from without against the bone, the so-called direct force, one will usually find the wound of the skin larger and the edges ragged and badly contused. The latter type may be more soiled than the former type and through the more extensive lacerations present a greater field for bacterial invasion than is found in the former type, yet each is to be considered as an infected wound.

In both the direct and indirect types of wounds, either with the small or with the large skin opening, one may find the same laceration of the periosteum, of the fascia and muscle and of the subcutaneous tissues, with the presence of a large infiltrating blood clot and possible injury to important nerves and blood vessels and tendons, and it is in these lacerated and bruised underlying tissues that we find the media favorable for the growth of bacteria and the production of infection.

The fracture of the bone may be transverse spiral, oblique or comminuted. In comminuted fractures the loose fragments of bone should not be removed, but should be replaced in as near their anatomical position as is possible. Even those fragments which are stripped of periosteum will take their part in the reparative process of healing just as well in compound as in simple fractures. That they will undergo necrosis and thus act as sequestra and sources of infection merely because the fracture is of the compound type, has not any logical basis for its presumption. Surely no one has ever advocated that a simple fracture, which is badly comminuted, should ever be opened and a search made for small detached fragments of bone that they might be removed.

The extent of damage to the periosteum will vary with the severity of the lesion. Its torn edges are usually ragged and stripped for some distance from the shaft of the bone. The laceration of the muscles and fascias is as a rule considerable. The extent of the bruising of the muscles should be carefully noted. No doubt a great part of this occurs as a result of the trauma incident to the handling of the limb before splinting and fixation has been made. The skin is dissected from the subcutaneous tissues to a greater extent than the size of the wound would indicate. The hemorrhage associated with any fracture is always large and not only fills the space about the line of fracture, but dissects to a considerable extent into the subcutaneous tissues and between the muscle planes. This blood clot presents a most favorable material for bacterial growth.

Important blood vessels and nerves and tendons may be cut by the sharp edges of the fragments and present most annoying problems. An extensive lesion of the larger or main arteries and nerve trunks may necessitate amputation.

The skillful treatment of compound fractures depends upon the knowledge and recognition of several important facts. First, all open fractures are to be considered as contaminated, the pathogenic bacteria having been carried into the tissues either through the direct force causing the wound, or by the protruding fragment of bone becoming soiled and carrying the organisms back into the tissues as the fracture is reduced. Secondly, a certain amount of the lacerated soft parts will either undergo necrosis or have a lowered nutrition and thus have less resistance to take care of any infection. Third, any blood clot presents the most favorable media for bacterial growth. Fourth, if the wound has been thoroughly cleaned, all devitalized tissues and blood clot removed, the wound may then be considered as potentially clean and *can be closed without drains*.

The treatment of a compound fracture, due either to a direct or indirect force or associated with a large laceration of the skin, or a small clean cut puncture wound, may be outlined as follows:

Careful examination of the vascular, motor and sensory functions, distal to the wound should be made before the anaesthetic is given. If there is evidence of severance of the large nerve or artery trunks, the patient should be advised that amputation may be necessary. If tendons have been cut the ends *may have retracted along their sheaths and thus this feature be easily overlooked during the operation.*

After the patient is anaesthetized the operative field is shaved without soap or water and the skin covered with fifty percent of tincture of iodine. The edge of the skin about the wound is excised so as to present a fresh, well nourished border. As a rule one-fourth inch will suffice. The wound is enlarged, if necessary, in order to give a clear exposure of the underlying structures. A large wound will heal as well as a small one and is only contraindicated where the scar may be a factor in producing a disability. Debridement or excision of all contused or devitalized tissue should then be most carefully done. This is a very important step and where important structures are not involved it is better to remove too much than too little tissue. The blood clot is removed by swabs of dry gauze and the wound filled with ether. This will cause any loose tags or shreds of fascia or muscle or periosteum to float and thus be more readily seen and removed. Any bleeding points should be sutured and a careful search be made for injury to nerve trunks or tendons. It will be well to remember

that large vessels may be severed and the hemorrhage controlled by blood clots which after six or seven days interval may undergo lysis and lead to severe bleeding. I have seen several instances in which this occurred in the femoral artery and in the posterior tibial artery.

The reduction of the fracture is now done. If it is necessary Kangaro tendon sutures or the Parham bands may be used to maintain reduction and will in no way complicate the healing of the fracture. Care should be used to obtain as perfect anatomical reduction as possible and all loose fragments should be utilized. If the periosteum is not too badly lacerated one may attempt to suture it. However this cannot be done except in a few cases.

The repair of any tendons should be done with silk sutures and an attempt to suture the tendon sheath with No. "oo" plain cat gut should be made. The muscles and fascias are brought together with some absorbable suture material, as plain or chromic cat gut. The skin is then closed tight with interrupted silk worm sutures and an alcohol dressing applied. Drains, either to the bone or the subcutaneous tissues, *are not to be used.*

The fracture is now to be treated as a simple fracture. Some form of splint which will maintain the reduced position of the fragment is to be used, but which will also allow of inspection of the wound and the use of moist dressings should it become infected. The writer uses almost exclusively the Thomas Splint as subsequent dressings may be made without moving the fragments or changing any extension that is being used. If plaster of Paris is to be used the operation should be done on a Hawley fracture table, which will admit of the application of the cast without changing the position of the limbs after operation. One should also reinforce the cast so that a window may be cut to allow inspection of the wound and any necessary dressing. The plaster of Paris cast will be rather difficult to use should the wound become infected and wet dressing be necessary.

The patient should be watched very carefully for the next few days. The temperature should be taken every three hours and notes made as to any local signs of inflammation. Throbbing and ache at the site of the wound, associated or not with a rise of temperature, demands immediate inspection of the wound. A rise of temperature alone may be due to absorption of blood or to the so-called "post operative" elevation. If signs of infection are present one or two of the sutures should be removed and a small probe inserted to determine whether pus has formed in the deeper structures. If pus is found then the wound should be considered as infected, all sutures removed, the wound opened

wide down to the bone and the treatment directed to control the infection. This phase of the treatment will vary with the operator. The writer has used the Carol-Dakin technique with gratifying results. The merits of other methods will not be discussed in this paper.

Compound fractures produced by bullets should be considered as clean wounds and operation is contra-indicated, unless the removal of the bullet is deemed advisable.

The differences in the treatment as outlined above and that of the orthodox teachings are: (1) The cleansing of the wound depends upon a careful and complete debridement rather upon the irrigation and swabbing with antiseptic solutions; (2) the layers of soft tissue structures are carefully sutured, and (3) the skin wound is closed without the use of drains.

It is my opinion that it is impossible to so cleanse the wound of a compound fracture that all bacteria are removed. If any devitalized tissues or blood clots are left in the contaminated field the bacteria are furnished with the most favorable media for their growth. On the other hand, if the surface of the wound consists of normal, healthy tissue the resistance to any bacterial invasion is much greater and bacterial growth is retarded. The return to normal conditions in the tissues is also hastened through correct anatomical replacement of the different layers. This careful suturing of the structures may also limit and localize any infection which may arise and thus prevent an osteomyelitis.

Infections in open fractures have resulted more frequently from contamination of the wound through the use of drains than from the primary wound itself. The skin is never clean and always presents a source of possible infection which may be carried in along the drain. If the wound is closed tight this factor in infection is eliminated. Under careful watching if any infection does arise with the wound closed, the stitches may be removed and the infection will not be any more extensive than had the wound been left open with drains and counter-drains.

Some surgeons have advocated the use of drains to take care of the hemorrhage, but there is not any justification for presuming that hemorrhage in a compound fracture is in itself any more a source of infection than in a simple fracture.

Through and through drains before infection is manifested, can only be condemned.

If the compound fracture involves a joint structure the treatment is the same. However in this type care should be used to wash out thoroughly from the joint any blood and to close the joint capsule as completely as possible.

Should the wound not become infected the after treatment is the same as for a simple or closed fracture. Active mobilization should be

begun as soon as possible, in order to preserve the joint function and also to prevent any involvement of tendons or muscles in the scar tissue which is incident to the fracture. If the skin has been severely contused, daily observation should be made for gangrene or eschars which will come often at the end of several days. These may prove to be a source of infection into the deeper structures. This is especially likely to occur about the knee joint where the bursal sacs are close to the skin.

Twenty-eight cases of compound fractures have been treated by the method outlined above and all with one exception have been converted into simple fractures without infection. In this one case there was a very extensive laceration of the skin and soft parts, with a considerable disturbance in the circulation. At the end of nine days the wounds broke down and a culture of the colon and catarrhalis bacilli found, so it seems to be reasonable to say that this was gangrene rather than a case of infection in the true sense of the word. The other cases were of the tibia, fibula, femur, radius and ulna, and of the humerus. Two compound fractures of the patella were comminuted and there was a severe laceration of the capsule of the knee joint. Each of these cases were complicated by a simple fracture of the femur on the same side and one of them had also a dislocation of the hip on the same side. Two cases of compound Potts fracture occurred.

The conclusion that has been drawn from this series of cases is that compound fractures, when seen early and are carefully cleaned by debridement or excision of all devitalized tissues can be safely considered as clean wound and thus closed without drains.

DISCUSSION

DR. H. O. BRUGGEMAN (Fort Wayne): I am in complete accord with the basic idea of Dr. Mumford's paper—compound fracture wounds, when properly debrided, can be closed without drainage. I am also certain that a great many lives and limbs will be sacrificed if the average practitioner attempts to treat these wounds as Dr. Mumford treats them. Debridement, or rather epulchage, is a delicate, painstaking operation requiring much skill and practice—it is not the rough-hewn excision of a wound which can be carried out with a contempt for anatomy and a disregard for the future function of the limb. The war taught us that when a debridement is performed the wound should be left widely open, with the idea of a secondary closure, or it should be closed tightly without drainage. Fortunately the vast majority of compound fractures which are seen in civil life require no treatment other than the application of a sterile gauze dressing and immobilization in a proper position. When, however, a compound fracture has been handled outside the hospital,

or when it is grossly contaminated, or when there is much injury to the soft parts a debridement is imperative. If a debridement is necessary then detached fragments of bone should be removed. When speaking of war wounds a distinguished Canadian has said, "Among foreign bodies the most sinister are fragments of fractured bone." Dr. Mumford says that it is impossible to so cleanse the wound of a compound fracture that all bacteria are removed. It is therefore wrong for him to introduce a foreign body, in the shape of a Parham band, into such a wound. There is one vitally important factor in the treatment of compound fractures which was not mentioned and that is the administration of a prophylactic dose of tetanus anti-toxin.

DR. H. R. ALLEN (Indianapolis): Some years ago I devised a system of putting transfixation pins through the skin, muscles and bones. Each pin has a flat drill point on one end and a soluble metal head or gimlet handle on the other end. When you push it through the skin and other soft tissues you drill through the bones and then push it through the soft tissues on the other side. In treating a fracture of both bones in the forearm you take first one bone and then the other and that gives you fixation for each of the bones: then solder a piece of low-melting alloy between the drill handles and separatus and that gives you normal separation between the shafts of the bones. Whether these fractures are originally compound or simple they may be compounded in order to see that perfect apposition exists between the fractured ends. Do not put pins through the fracture zone but go back an inch or so and then put the retention drills through normal, healthy tissues. The pins used are steel, silver-plated. If there is any drainage material that is tolerated by the human body it is silver, and if there is any system of drainage that is thorough, it is through-and-through drainage. If you use a through-and-through silver drain you have almost answered the question of good drainage. For a number of years I have been using this method in appropriate cases and have never had a patient develop a whole degree of temperature. When it comes to leaving metallic foreign bodies permanently in arms or legs you all know there may be serious trouble, especially if you put them in the zone of the fracture, so why not put them back a little from the zone of fracture? These pins give you outside control over inside control. When you are through you can, with warm water, melt the soluble alloy stabilizers and separators and pull the pins out. Then your patient is not permanently half hardware and half human. He is all human.

DR. E. B. MUMFORD (closing): The object of my paper was to get away from the idea of

drains in compound fractures. No matter what you do, you should not put in a drain to take care of some infection that may come later on.

Doctor Bruggeman spoke of treating the fractures of the simpler form by putting in a piece of gauze and letting them go. That is all right, and you can get away with it in some cases; but my plan is to get away from the drain first, and second, to use more thorough cleansing methods than swabs and antiseptics.

In regard to the use of metal bands, I do not see any reason why, if you have a compound fracture which does not become infected later on, the putting in of a band should produce any more infection than if you did not use it. My whole plea is to do away with the drain in compound fracture to take care of an infection which does not exist.

LOCAL ANESTHESIA AS A SUPPLEMENT TO GENERAL NARCOSIS*

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While the attempt to alleviate pain by the use of local anesthetic agents is as old as the history of the race, no real success was attained until the discovery of cocaine.

The history of local anesthesia really begins with the discovery of cocaine. This alkaloid, which is derived from the cocoa plant, is indigenous to Peru and Bolivia and has been cultivated since prehistoric times and has been prominent in the religious and political life of the people of South America. "This plant was regarded as a gift of God, which satiated the hungry, gave renewed energy to the tired and weary and caused the unfortunate to forget sorrows." The chewing of the dried leaves became a racial peril and its cultivation was, for a time, forbidden. Observations were made from time to time by travelers in South America of the curious physiological effects of this plant upon the natives. Some of the leaves were taken to Europe and from them Nieman and Lossen of Gottingen first extracted cocaine.

For twenty years following, German investigators were extremely active in accumulating clinical and experimental data on the use of cocaine as an anesthetic agent in the performance of major and minor surgery. Great enthusiasm was aroused and it was confidently expected by many that local anesthesia would supplant general narcosis in the performance of all surgical operations.

In spite of the fact that warnings had been given of the dangerous toxic qualities of the drug, it began to be widely used, with the inevitable result that fatal poisoning, following

(*). Presented before the Section on Surgery, Indiana State Medical Association, Indianapolis session, September, 1921.

its use for anesthetic purposes, became all too frequent.

Unquestionably a great many deaths have been caused in this manner in comparatively recent years which should have been avoided and indeed would have been avoided had the profession been thoroughly informed of the experience of German surgeons in the early years following the discovery of cocaine. Never will I forget my own experience, when, as an interne at the City Hospital on a dull afternoon with no one in the dressing room of Ward 4 but myself, I attempted to excise a perfectly inoffensive bit of scar tissue, following a circumcision, which for cosmetic reasons the patient wished removed. Not over one-half dozen m. of a 2% solution were used to infiltrate the area and yet within five minutes after beginning the infiltration, the man was unconscious and narrowly escaped death.

I later found that this experience was in no sense unique, and that within the comparatively narrow circle of one's own acquaintances, similar experiences were related. It is unnecessary to remark that since this time my interest in cocaine as a local anesthetic in general surgery has been purely academic. My education, as far as its practical use is concerned, was long ago completed.

It should be mentioned, however, in passing, that during the developmental period of local anesthesia, cocaine contributed a great deal to the advancement of the specialties, notably ophthalmology, rhinology and laryngology. As a result of its anesthetizing properties, when applied to the surface of serous and mucous membranes, it can be used with comparative safety.

As a result of the interest in local anesthesia aroused by the discovery of cocaine and the accumulated knowledge of its dangerous toxicity, a large number of other agents were soon made. The discovery of cocaine and its later preparation synthetically gave the key to the chemists for the discovery of these agents: tropococaine, eucaine, holocaine, stovaine, alypin and novocaine are the best known. All can be dismissed from the discussion except novocaine.

Novocaine meets all the indications of an ideal local anesthetic agent. It is nontoxic in doses sufficiently large to leave a safe margin when used even in large quantities. It is non-irritating to the tissues and wound healing is not delayed nor altered in any manner. It can be sterilized by boiling without altering its physiologic properties. It combines with adrenalin, which greatly enhances its anesthetizing properties.

The question of toxicity is of the very greatest importance. It is for this reason alone that cocaine has become obsolete. It must not be forgotten, however, that novocaine is a drug that has, when used in concentrated solution and

large dosage, dangerously toxic properties. The secret of its safe usage lies in the use of weak solutions when in combination with adrenalin. When so combined, .05 to 1 percent solution will give perfect anesthesia maintained for one to two hours. When used in such strength, Braun has repeatedly used 250 c.c. or 1.25 gram of novocaine, 18 gm. without untoward effects.

The use of suprarenin or adrenalin with novocaine is absolutely essential to proper anesthesia when weak solutions are used. The use of adrenalin does not make the novocaine less toxic, but it does greatly enhance its anesthetizing properties, thereby permitting complete anesthesia with small dosage.

When one comes to consider the practical use of local anesthesia, there are a number of factors which arise for consideration other than the rather narrow one of anesthesia. The safety of the procedure is admitted by all, and from my own experience, patients so operated have been universally satisfied with this type of anesthesia, which I believe is strong testimony that they suffered but little discomfort. There are, however, certain real obstacles which I wish briefly to discuss.

It is unquestionably true that there exists in the minds of a considerable number of people a prejudice against the use of a local anesthetic. This will usually be found to have resulted from a previous unpleasant experience during some minor operative procedure. They have been the victims of an alleged local anesthetic, such as carbolic acid, freezing with ethyl chloride, local application of cocaine and possibly placebos for the incision of localized abscess, such as boils or paronychias and the repair of small lacerated or incised wounds. This is purely a matter of faulty technique, as adequate local anesthesia cannot be obtained by any of these methods and it results in an unhappy memory which remains to confound the surgeon who proposes to use such a method again. Such an experience is not infrequently the beginning of noxious psychological factors which must be eliminated or controlled before local anesthesia can be successfully used.

There are also a considerable number of individuals who prefer, or at least think they prefer, to be unconscious during a surgical procedure of any magnitude performed on their own body and therefore desire some form of general narcosis. This reluctance to consciously face the ordeal of an operation, even though it be painless, throws an illuminating light on the psychology of the operative patient. It shows most conclusively to the surgeon that the task of rendering anesthetic the tissues in the field of operation is only a small part of what is necessary for the comfort of the patient and the success of the method. Indeed, I think it can be safely said that it is much easier to do

a painless operation under local anesthesia than it is to control the psychic reactions. In my experience, the real objection to local anesthesia in selected cases is not the difficulty of adequate anesthesia but of controlling the purely mental reactions of the patient. Novocain in combination with suprarenin is an ideal local anesthetic and it can be safely depended upon, when used with proper technique, to make possible many major surgical procedures without pain. It should be, and I think is, almost universally used and has become standard. But no method of controlling the purely psychic reactions of the patient has been satisfactorily developed and until this can be done, I predict local anesthesia will never develop the popularity either with the profession or the public to which its merits entitle it.

Granting, therefore, that the elimination of physical pain can be successfully accomplished by the use of novocain and suprarenin in combination, let us turn our attention to a classification and discussion of the various methods proposed and used for the control of the patient's mental reactions. These can be classified under three heads:

- (1) Suggestive Therapeutics.
- (2) Pre-anesthetic administration of drugs such as morphine, scopolamin and mag. sulphate, the latter used synergistically with morphine.
- (3) Light inhalation gas-oxygen anesthesia.

By proper and skilful use of suggestive therapeutics, there lies a vast field of usefulness for the surgeon. Indeed, all successful surgeons are adept psychologists. Our medical friends are repeatedly and I believe rightly calling attention to the psychic damage suffered by patients especially of neurasthenic tendencies as a result of operative procedures. This damage, I believe occurs almost entirely previous to the actual operation. The ordinary operation, followed by a smooth convalescence, does not, as a rule, unfavorably affect the patient's psychic reactions but the acute emotional reactions initiated the moment the question of surgery is broached, which continues all too often to the very moment of anesthetic unconsciousness, plays havoc with his psychic centers. The basic cause of this pre-operative psychic disturbance is fear, a very elemental but profoundly important human emotion. Its manifestations are often masked and show themselves in aberrant mental reactions. If the surgeon can, by the influence of his own personality, banish fear from the consciousness of his patient, he has accomplished successfully the first stage of not only local anesthesia but general narcosis.

I very well remember the remark of a man made some six months following a simple hernia operation. After all arrangements had been made, room engaged, business affairs adjusted

for a month's absence—in fact, very systematic and completed plans for an elective operation, he entered the hospital and registered and while going up on the elevator to his room, he told me he was seized with a panic of fear which shattered his nerves and required the exercise of all the will power at his command to prevent him bolting and running at the first opportunity. This patient, it is unnecessary to remark, did not have a successful first stage anesthesia. Unfortunately, the surgeon does not control all of the avenues to the patient's consciousness. His friends and relatives have access to it and are quite as apt to augment as to alleviate his fears.

But the most pernicious factor in the production of noxious psychic disturbances in the local anesthetic patient is the average modern hospital. He no sooner enters the door than his consciousness is assailed by unpleasant odors, disquieting noises and, as a rule, not a single beautiful thing meets his gaze. At a time when his intellectual sensorium is extremely sensitive, he is flooded with painful stimuli which disorganizes his courage and weakens his stamina. Add to this the sights, sounds and odors of six or eight operating rooms on the morning of the operation, and you can get some conception of the impossibility of the average hospital for successful local anesthesia. Suggestive therapeutics is very difficult to accomplish in such an environment. Recently, while doing a double herniotomy under local anesthesia, the patient was greeted by the frightened screams of a child being etherized preparatory to a tonsil operation, and a little later he was an unwilling spectator of this somewhat sanguineous procedure through the open door. It required an extra cigarette before he entirely recovered his mental equipoise.

The routine observed in the operating rooms of the average modern hospital would have to be greatly altered to meet the requirements of successful local anesthesia. All noxious sights, sounds and odors eliminated and a real effort made to soothe rather than irritate the patient's sensibilities.

(2) Pre-operative administration of drugs.

I have purposely classified the use of drugs such as morphine and scopolamine in local anesthesia as one of the methods of controlling the patient's psychic reactions. This I believe to be their principal function. Their use does not permit of any less quantity of novocain nor less infiltration of the operative field. But the morphinized patient is drowsy and remarks that he wants to take a nap. In this condition, he is much less susceptible to all kinds of conscious stimuli and to that extent will his intellectual sensorium receive less insult. The threshold of psychic impressions will be raised so that he misses a considerable number that might be disturbing in character.

Gwathney has recently advocated the use of magnesium sulphate solutions to be used in conjunction with morphine. He gives 5 c.c. of 25 percent solution diluted to 200 c.c. and given intravenously. His clinical experience would seem to indicate that when thus used the effects obtained from morphine even in small dosage are greatly enhanced. This, he states, is the ideal pre-anesthetic medication for gas-oxygen anesthesia. If this should prove to be true, it would be equally valuable in local anesthesia.

(3) Light inhalation anesthesia as a method to control the patient's psychic reactions.

Crile has quite recently been operating in a certain group of cases under a form of anesthesia which he designates as analgesia. In addition to completely blocking the sensory paths in the field of operation by novocain, he administers a very small amount of gas—oxygen. The patient is entirely conscious and knows everything that is going on. His mental state is one of exhilaration.

It seems to me that the part played by this gas-oxygen in the so-called analgesic anesthesia, as used by Crile and others, is largely a psychic one. Just as the novocain produces a sensory block, so does the light gas-oxygen produce a psychic block and renders the patient immune to the noxious stimuli of his immediate environment. The real anesthesia is produced by the novocain while the patient's mental reactions are controlled by light gas-oxygen.

A very interesting phenomenon in the use of local anesthesia in the performance of major surgery is the very profound effect upon the psychology of the surgeon. The mental reactions of the local anesthetic patient have been discussed at some length. Of no less significance is the striking change in the mental process of the surgeon, when in the one instance he is operating on an unconscious patient and the other a fully conscious and intellectually alert individual. He immediately becomes aware that he is operating on a living, conscious, human being whose physiological processes are intact and the tissues of whose body react in direct ratio to the injury done them. Blood vessels, nerves, fasciae and muscles all have a new significance.

When we stop to reflect on the early training of surgeons, it is not difficult to understand how we may develop with an improper attitude toward living tissue.

The student's first introduction to the manual exploration of human tissue is in the dissecting room. It is unnecessary to remark that here delicacy of touch is not regarded as an essential quality of good technique. The next step in his training is a course in operative technique on the cadaver and later a course in dog surgery. By the time these courses have been completed, whatever instinctive reverence the student may

have possessed for living, human cells has disappeared. He begins operating as an assistant on unconscious patients whose tissues become the recipient of the same kind of manipulation as used in the dissecting room or dog surgery.

I have repeatedly observed internes, while assisting them in hernia and other operative procedures, show a disregard for the rules of gentle manipulation that I feel sure was an acquired and not a natural trait. With an alert human being under the knife, the tissues involved take on something of the significance of conscious existence and it would, in my judgment, add greatly to the value of surgical training if the student did his first operative work under local anesthesia.

TECHNIQUE.—The technique of local anesthesia, while not difficult, requires close attention to detail. Novocain, for reasons already given, is the drug to be used. When a considerable field is to be infiltrated .05 percent solution is the proper strength. As much as 250 c.c. or 300 c.c. of such a solution can be used without danger. In minor operations, such as amputation of fingers and toes, 1 percent solution is advisable. It should be made with physiological salt solution and boiled. Two to three minimis of 1-1000 adrenalin solution should be added to each ounce of novocain solution after it has cooled. If the adrenalin be a synthetic preparation, it can be boiled with novocain. A fresh solution should be made for each operation and for this reason tablets containing novocain and synthetic adrenalin are the most convenient for daily use. A syringe holding 5 or 10 c.c. with a locking device to prevent the needle from slipping is necessary for smooth injection. Due to the increasing use of local anesthesia, a good many devices for expediting the injections are appearing on the market. It remains to be seen how practical they will prove in practical use.

The local anesthetist should familiarize himself with sensory nerve distribution. His entire attention at this stage of the operation should be focused on injecting the novocain into those tissues which carry the sensory nerves supplying the field of operation. The skin and fascia are the planes that contain most of the sensory nerves. Fat and muscle are relatively insensitive.

The solution can be injected directly into the tissues to be operated upon, the so-called infiltration anesthesia, or the line of incision circumscribed, thereby blocking all sensory nerves entering the field of operation—the so-called circumduction or conduction anesthesia. Both have their distinct indications. I prefer infiltration anesthesia in all abdominal work and non-inflammatory superficial tumors, while conduction anesthesia is essential in dealing with inflammatory skin lesions and the amputation of toes and fingers.

If one uses the method of infiltration, the operation may proceed immediately following the injection, while if the conductive method be employed, a certain length of time must be granted for complete anesthesia.

There is a marked alteration in the appearance of the tissues following the injection of larger quantities of the solution. They appear edematous or watery and usually bloodless as a result of the adrenalin. It requires some experience to recognize tissues readily in a field so altered.

An ample margin beyond the immediate limits of the operative field should be anesthetized, as it is very disconcerting to the patient to have a snip of the scissors or artery clamp catch a sensitive nerve. A misstep of this kind on the part of an operator will very quickly demoralize the courage of a patient. One can usually sense the nervous reactions of his patients and, as a rule, they are at light trigger tension.

It seems to me that there is an excellent field for the general anesthetist to develop in mastering the technique of local anesthesia. There is every reason why this should be done by a trained expert. Its technical possibilities are susceptible of quite as much development as are those of general narcosis, indeed, I think more so. If an expert were available, I feel sure it would greatly increase the use of local anesthesia.

In conclusion, local anesthesia should not be regarded as a rival of general anesthesia, but as a supplement to it. Some form of general narcosis remains the anesthetic of choice in the great majority of major surgical procedures. For myself, I now regard novocain the anesthetic of choice in all uncomplicated hernia, including umbilical, ventral, inguinal and femoral; all minor operations on the extremities, such as amputation of fingers and toes; excisions of all superficial growths involving skin and subcutaneous tissues and resection of ribs for empyema.

The benefits to be derived by the patient from local anesthesia are not confined to saving him from the ill effects of general narcosis. They arise quite as much from a better appreciation on the part of the surgeon of the psychological factors involved in an operation both in relation to himself and the patient.

DISCUSSION

DR. A. C. ARNETT (Lafayette): We have, as Dr. Hadley mentioned, three methods of anesthesia—general, local and a combination of the two, all of which have their various adherents—some of them almost fanatical. General narcosis has been, is now and will continue to be the method most used in general surgery.

Local anesthesia, which Dr. Hadley discussed rather in detail, has its positive indications. There are certain types of cases in which, to

my mind, it is very positively indicated, such as the resection of the ribs in empyema, because we do not think these cases should have a general narcosis by the inhalant method in any form.

I would like to emphasize what Dr. Hadley said regarding local anesthesia—that it gives a surgeon a training to operate under local anesthesia alone that he cannot get in any other way. It gives him a respect for tissues and many lessons are impressed upon him that he does not forget. I think every surgeon should be able to do any operation in his repertoire under local anesthesia, because it can be done successfully.

Dr. Hadley mentions the difficulty of mental preparation with a very light gas-oxygen analgesia. In certain cases where local anesthesia is positively indicated you can produce your mental preparation with a very light gas-oxygen analgesia and proceed with the administration of your local anesthetic, which is nothing more nor less than the method of Crile. I cannot conceive of a nephritic or cardiac condition that a little gas-oxygen would harm. The anesthetic should be preceded by the administration of some indicated narcotic, except in a very few instances.

Coming to the combination, I think the ideal agent for general narcosis is gas-oxygen, if you use a local anesthetic in connection with it, for the reason that gas-oxygen is flexible, it is quick, it is not unpleasant, and you can produce almost any degree of narcosis you wish. In adding it to your local anesthetic you can produce absolute relaxation of the belly muscles in abdominal cases. One of the drawbacks of the combination of local and general anesthesia that more or less frequently is encountered is that sometimes we are not able to work with our regular anesthetist, and to get the best results for this method you must have absolute cooperation between the surgeon and anesthetist, which means more than mere cooperation, as the anesthetist must know what the surgeon is trying to do and instinctively cooperate with him.

Dr. Hadley mentions another thing that I do not quite comprehend. That is the training of specialists in anesthesia and the administration of local anesthetics. It seems to me that the surgeon who is capable of doing an operation under local anesthesia should be capable of producing that anesthesia and should be the one to do it. I admit that if he operates case after case it might take too long, but his assistant, who is his right hand, should precede him and anesthetize the patient if he uses a local anesthetic pure and simple.

DR. FRANK H. JETT (Terre Haute): The doctor spoke about adrenalin as a local anesthetic. I used fifteen minims of adrenalin to the ounce at first, but I found I was getting

a toxic effect from the adrenalin. Now I do not use more than five minimis to an ounce of solution and do not like my patient to get more than fifteen minimis in an operation. To use 250 c.c. as he mentions, would be to give two drams of adrenalin solution. This is quite a large dose of adrenalin.

Another thing, I do not think you learn to use a local anesthetic as quickly as a general narcosis. It is not so simple as "to take a small needle and get a start and take a long needle and go deeper". You are expecting that patient to stay under for an hour, and if you expect that you must give an intradermal injection first; then infiltration; then you can use your deep block of the nerve. I think the nerve block in a hernia operation is very important. One drop of solution in that nerve is worth an ounce of solution scattered around in that neighborhood. It is not necessary to use a large amount, except in the hands of the beginner until he learns where to put it; but it is necessary to put it in the right place.

Older people need local anesthesia; they do not stand a general anesthetic well. There is no better indication for local anesthesia than strangulated hernia, and this should never be operated under general narcosis. Gastrojejunostomy can be done under local anesthesia. But local anesthesia cannot be used as a pick-up. Knowing your nerve supply, sharp dissection, handling tissue tenderly, never being rough or being in a hurry, and knowing what you cannot do, will make local sometimes life saving. Local anesthesia will be used more and more; there is no doubt in my mind about that.

DR. GEORGE R. DANIELS (Marion): There are two or three little things about the local anesthesia that I want to speak about and that I think important. I think it will do away with general anesthesia. In the first place, as the doctor emphasizes, you must have the confidence of your patient. You will notice a good local man is a good conversationalist. He gets the attention of the patient and keeps up a rapid fire of talk, and many times he has finished before the patient realizes he has had anything done. A small hypodermic needle is necessary, a very small one. You can puncture the skin more readily with a small needle than with a large one, and do it quicker. Then have a long needle, a good steel needle fully $2\frac{1}{2}$ inches long. You get through a lot of tissue, and you can direct it; it will not break, it will bend. Do not have a 5 c.c. syringe, have a 30 c.c. syringe, and have three or four of them lying around.

I am not at variance with the doctor in any way, but these are little minor details that are important in local anesthesia, and they are the very things we may overlook. The chief thing is the quick thrust of the first needle. Then you can take a long needle and go in better.

I do not know if apothesine is the same as novocain. However, you can use all the apothesine you wish, or you can use a large amount of a one-half percent solution of novocain. I would say to have at least two of these ounce syringes ready.

DR. MURRAY A. HADLEY (closing): All I wish to say is this: It is apparent that local anesthesia is not a very popular type of anesthesia, and the reason I think is to be found in the fact that our hospitals and our training, everything connected with operative procedure, has been built around a different idea. Until there is a change in that direction no one will have a great amount of pleasure operating under local anesthesia. Unquestionably the burden is transferred from the patient to the surgeon in local anesthesia, because it is harder to operate. I hope as a result of this discussion to in some ways popularize the method. I am not an extremist in this method of operating. But you can operate painlessly in a great many major operations under local anesthesia. In a certain group of cases local anesthesia is required. Another group does not require it, but you get along better with local anesthesia than with general narcosis. There are many people traveling around with hernias that should be operated, and they will be operated more quickly if they find it can be done under a local anesthetic instead of a general narcosis.

CONCUSSION OF THE BRAIN AND FRACTURE OF THE SKULL*

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CONCUSSION

A. DEFINITION.

Concussion of the brain or stunning is a clinical condition characterized by more or less disturbance or complete suspension of the functions of the brain as a result of force applied to the head, which leads to some commotion of the cerebral substance, and may or may not be associated with hemorrhage within the cranial cavity.

B. SYMPTOMS AND SIGNS.

(a) Headache.

Headache is the chief symptom of concussion of the brain. It is present sooner or later in almost every case. It may vary in character from a sharp, acute, throbbing, beating pain to a dull ache or heavy feeling about the head.

Associated with this symptom is restlessness and nervousness.

(b) Nausea.

Nausea is the next symptom of importance. Associated with this is vomiting, which is

(*). Thesis for cum laude degree, Indiana University School of Medicine.

usually present from one to three hours after eating.

(c) Unconsciousness is a condition frequently found in profound concussion.

Associated with this is delirium.

(d) Other subsequent and frequent clinical findings are elevation or lowering of temperature, increase or decrease in pulse rate and blood pressure, choked disc, pupillary changes, temporary paralysis, death.

C.

In a series of nineteen cases of concussion admitted to the City Hospital of Indianapolis during the year 1920, the following symptoms and signs were present:

(a) Headache of some character in every case—100 percent.

(b) Restlessness and nervousness in 21 percent.

(c) Nausea present in 25 percent.

(d) Unconsciousness more or less complete in 21 percent.

(e) Delirium in 5 percent.

(f) Elevated temperature, 25 percent.

Lowering of temperature, 5 percent.

Increased pulse rate, 21 percent.

Lowering of pulse rate, 10 percent.

Involuntary micturition, 5 percent.

Death, 5 percent.

Morbidity. Questionnaires and examinations of eleven of the nineteen cases of concussion, taken six months to one and one-half years after the accident, show the following:

1. No development of new cranial nerve changes in addition to those found present a few hours after the accident.

2. All but three of the patients complain of frequent headaches, which were not present before the accident. Associated with this symptom is nervousness, present in six cases.

3. One patient does not remember very well since the accident. He feels as if he might fall after stooping. He has a quick temper, and is very impatient since the accident. He wants to stay at home and sleep. Formerly he was always out.

4. Another patient admires women now, and wants to be in their society constantly, a thing which developed since the accident.

5. Still another finds his legs very weak, and cannot use them long at a time. He is also more drowsy than before.

6. A boy, age 15, likes to go to school now. He never did before the accident. He craves oranges. His knees and ankles hurt at times. He feels as if he could not stand upon them. Although he cannot remember as well since the accident, his present school record is much better.

7. After lying down, one patient feels very dizzy when getting up.

8. A boy, age 10, is more like a child, according to his mother. He does not learn as well in school and suffers from terrible headaches.

Six of the eleven cases heard from are unimpaired in ability to work. The seventh is unable to work. The eighth is a teamster, and must keep someone with him all of the time. Since the accident, he has fallen from the wagon upon the back of one of his horses. The tenth is unable to do any kind of work. The eleventh cannot work as he used to. He is laid off from time to time and is not strong.

Much of the late evidence goes to show that some of these cases which were diagnosed as concussion may have had associated with the injury fracture of the skull.

Discussion of Morbidity. Thus we see that although the mortality is low, the morbidity is very high. Recovery from concussion may be complete and permanent, but on the contrary, the entire nature may undergo a change. Such a change, which may not be evident for weeks or months, is apt to be manifested by egotism, selfishness, censoriousness, mendacity, great irritability, outbreaks of violent rage about trivial things and forgetfulness. The forgetfulness is particularly as to recent events. There are headaches, insomnia, attacks of depression, lassitude and vertigo. Such a patient may be susceptible to alcohol, the heat of the sun, and physical or mental strain. He can do nothing requiring mental effort.

After concussion, a patient may develop hysteria, epilepsy, amnesia or actual insanity. A condition resembling Korsakow's psychosis may develop. (Confusion with gaps in memory which are filled up spontaneously by fabrications, the patient also having multiple neuritis.)

Confusional insanity or mania may arise, or a condition like hallucinatory paranoidia or mental weakness which may resemble paresis.

Concussion may pervert or wipe out all memory of the causative accident, and also, strange to say, of a varying period preceding the accident. The loss of memory may be permanent, or may only be temporary. Statements made regarding an accident by one who has had concussion must be received with many grains of salt. Victims of arteriosclerosis are particularly apt to develop mental trouble or neurasthenia. Rege insists upon this.

The actual damage of concussion can be measured only by the physical and mental disturbances which follow—either immediately, with partial or complete loss of consciousness or delayed psychomotor symptoms, which may not develop for from twelve to forty-eight hours.

History of Concussion. The early thought in regard to concussion was that it was a condition produced by molecular vibrations in the nervous substance of the brain, unattended by any demonstrable injury.

Duret's observation profoundly modified surgical thought, and led to the opinion that in concussion of the brain, there is an injury to the brain itself; a rupture of cerebral vessels brought about by the advance and recession of waves of cerebral fluid. The waves flow in the direction of the force.

Keen says that there may be slight brain injuries, which can properly be called "concussion", but it is better to consider concussion as identical with laceration of the brain.

Kocher considered concussion as identical with contusion of the brain.

Von Bergman claims that there is such a condition as concussion, which may be pure concussion, or may be associated with organic damage, and even if a man dies, and is found to have an organic injury, the concussion may have caused, or at least have hastened, the fatal result.

Discussion. The word "concussion" is derived from the Latin *contuere*, meaning "to shake up". It is evident that direct force of any character applied to the head will produce a momentary displacement of the brain. Force applied to any part of the body may be transmitted to the brain and produce concussion indirectly. Therefore all brain injuries are primarily concussions.

Concussions may be simple or may be associated with many other forms of injury, e. g.:

- (a) Scattered areas of contusion.
- (b) Lacerations.
- (c) Local or widespread punctate lesions of the blood vessels producing hemorrhage of the pia-arachnoid, and even of the cortex as well.
- (d) A break in the continuity of the bones of the skull.
- (e) Laceration of the scalp.

2. The blow gives rise to a stimulation, which is followed by a relaxation or exhaustion of the nerve cells. The higher the type of tissue, the more susceptible and responsive is it to stimuli. The more responsive to stimuli, the greater the degree of exhaustion. The brain is the highest type of body tissue. Mild exhaustion produces a desire for sleep; more severe exhaustion, headaches of varied character, while extreme exhaustion is manifested by a reversible process of unconsciousness.

The more intense the exhaustion, the deeper the unconsciousness. This condition is closely allied to shock, and according to Crile is but one form of shock.

3. Exhaustion and even unconsciousness may result without any gross anatomical lesions. If, however, vessels are ruptured, and tissue is deprived of oxygen, according to Cannon, the deoxygenized tissue takes up fluid and swells. The resulting edema may be localized or generalized. If the edema is extreme, and the cells

die, liquefaction necrosis ensues. This is then a supplementary condition, which may be associated with concussion.

4. The presence of large ruptured vessels in the meninges, or a break in the continuity of the bones of the skull, but adds to the gravity of the injury.

FRACTURE

Fracture of Skull. A fracture of the skull is a break in the continuity of the bones which constitute that structure.

The total number admitted to the City Hospital during the year 1920 was twenty-five. The total number of deaths was fifteen, or 60 percent.

Eight of the fifteen cases (46.6 percent) resulting in death were moribund upon admission to the hospital. Four of these cases died in the admitting room a few minutes after entering. One case died in six hours; another in fourteen hours.

Two of the moribund cases were operated upon. In one case pieces of bone were removed from the compound fracture and the bone shelf elevated. This case died in five hours. The other case was operated upon six hours after entrance and decompression done, but the patient died in the surgery.

There were seven cases which were not moribund, but which died. Upon three of these, operations were performed. One case in fair condition was given an anesthetic a few hours after admission and died before the operation was started. Death was probably due to the ether, which increased the already existing exhaustion. A decompression was done upon a second immediately upon entrance, who had a compound depressed fracture of the vault. Pieces of bone were removed, and the wound closed. The patient died in twenty hours.

A third case was given an anesthetic upon admission. The wound was extended and revealed a fissure fracture through the vault. Blood was oozing through the fracture. The wound was cleaned and closed with drainage. The patient died in 46½ hours.

Of the remaining four cases, who were not moribund, upon which no operation was performed, but who died,

One lived twenty-four hours;

One lived twenty-five hours;

One lived twenty-six hours;

One lived four days.

Number of decompressions done, 2.

Ten, or 40 percent, of the cases which were diagnosed as fracture of the skull lived. The x-ray disclosed fracture in six, or 60 percent. Four of these were large linear fractures through the vault.

Case No. 1. A man, aged twenty-one, had a wide linear fracture through the parietal bone, and remained in the hospital ten days.

Case No. 2. A boy, aged six, had a wide linear fracture of the vault, extending from the frontal to the occipital bone. He remained in the hospital for twelve days.

Case No. 3. A boy, aged eleven, had a wide linear fracture through the occipital bone. He remained in the hospital fourteen days.

Case No. 4. A man, aged thirty-five, had a wide linear fracture in the lower occipital bone, extending forward into the base (middle fosse) and involving the temporal bone. This patient remained in the hospital thirty days.

Case No. 5. A man, aged twenty-six, showed from an x-ray a punctuate fracture over the left eye, with displacement inward of a few bony fragments. An operation was performed, and the fragments removed. The patient remained in the hospital twelve days.

Case No. 6. A man, aged thirty-four, had a linear fracture extending from the frontal region two inches above the left orbit on a horizontal plane, to the left occipital region. Decompression was done. The patient remained in the hospital thirty-four days.

In the remaining cases, the x-ray showed no perceptible fracture, the diagnosis being clinical.

Case No. 7. This case was a woman; age not given. Clinical diagnosis of fracture of the base. Temperature slightly elevated for a few days. There were early signs of increased intracranial pressure. There was no definite evidence of fracture—diagnosis questionable. The patient signed her own release in ten days.

Case No. 8. A man, aged forty, was struck by a street car. On admission, he was found unconscious and vomiting. On the following day—T. 98, P. 50, R. 14. On the following two days, the patient had a slightly elevated temperature, 99 to 100. Pulse 60, then 70. Paralysis of the left arm existed, which persisted. He left the hospital in thirty-one days.

Case No. 9. A boy, aged seventeen, was in a motorcycle accident. When admitted he was unconscious. No abrasions were found about the head. The patient was bleeding from the nostrils and ears. No paralysis; pulse strong and regular. Cheyne Stokes respiration absent.

The patient gradually improved, until the eleventh day, at which time he developed a large mass over the right mastoid region. A mastoidectomy and decompression revealed practically nothing. An incision of the mass later revealed a large pocket of pus (*staphylococcus*), communicating with the external auditory meatus. Later pockets of pus developed in other parts of the body, but were incised. The patient improved and left the hospital in thirty-two days practically well, except for a slight mental aberration.

Case No. 10. A man, aged twenty-six—no history of the injury. The patient remained unconscious for a number of days, but no phys-

ical signs of any importance could be found. The patient was nauseated and vomited. The spinal fluid on the fourth day revealed slight intracranial pressure. The eye grounds were negative.

The patient gradually regained consciousness, but remembered no accident. He remained in the hospital thirty-four days.

Morbidity of Patients Having Fracture of Skull. Questionnaires and examinations of six of the patients mentioned above as having fractures of the skull who lived show from six months to one and one-half years later the following:

1. One patient, who had a punctate depressed puncture of the skull, has been very forgetful since the accident. Although the patient is more nervous, his working capacity is good.

2. Two patients who had large linear fractures of the vault, upon which no decompression was done, complain of headaches at times, together with dizziness and swimming in the head. These two are, however, in as good a physical and mental condition as before the accident.

3. Another has never been entirely rational. He cannot read or write. He sees large objects before his eyes, and has frequent attacks of severe headaches.

4. One patient, whenever he is under any stress, especially mental strain or suspense, becomes very nervous and has a dull aching pain in his head difficult to locate or describe. At times he is apt to go to pieces, and finds self control difficult.

Discussion. In fracture of the skull, mortality and morbidity are both high. Fractures of the base are apt to be associated with paralysis of the cranial nerves. The palsy indicates the site of fracture. In fractures of the anterior fossa, the olfactory nerve may suffer. In fractures of the middle fossa, the facial nerve most often suffers. The eighth is sometimes injured. Other nerves which may suffer alone or in combination in fracture of the base are the abducens, the motor oculi communis, the trigeminus, the pneumogastric, the optic, the spinal accessory, the hypoglossal and the gloss-pharyngeal. Optic neuritis often arises after the first week. Added to the above may be all the conditions associated with concussion.

Harte (*Annals of Surgery*, October, 1901) has collected forty-six positive cases of fracture of the base of the skull from records of the Pennsylvania Hospital—35.5 percent recovered.

Ranschoff collected 190 cases of fracture of the base of the skull. The mortality was 65 percent. Over one-half of the fatalities were within twelve hours. Only 15 percent died after the second day. Of 98 cases with profound coma and respiratory disturbance, 90 percent died. (*Annals of Surgery*, July, 1910.)

According to Hartley, in cases treated expectantly, the mortality is 90 percent; in cases treated by operation, it is less than 35 percent. (*American Journal of Surgery*, December, 1919.)

History shows that 2 percent of all fractures are skull fractures.

1. Simple linear fractures of the vault of the skull without symptoms of brain compression are attempts of nature to produce natural decompressions, and require no surgical intervention. If compression symptoms become present, they must be taken care of accordingly.

2. Simple depressed fractures of the skull, with or without symptoms of brain compression or irritation, should be treated by elevation.

3. Compound fractures of the skull should be treated as compound fractures of other bones.

Fractures of the Base. Fractures of the base are much more common than is commonly supposed. The x-ray will not always disclose fractures through the small bones of the base. Therefore a diagnosis of fracture here is very difficult without the presence of any localizing symptoms or signs.

Fractures of the base are more common through the middle fossa, but are frequently associated with a fracture through the anterior fossa. The fractures through the posterior fossa are almost always fatal. A severe concussion is necessary to break this bone, and besides, it lies very close to the medullary centers. Fractures through the anterior and middle fossa are prone to be compound on account of their proximity to the nose, mouth, ears and pharynx. Complications frequently follow, such as:

1. Meningitis.
2. Brain abscess.
3. Deep cellulitis and abscess of the deep fascia of the neck.
4. Metastatic abscess and septicemia.

THE SIGNIFICANCE OF SYMPTOMS AND SIGNS *Signs.*

The first procedure is to determine the amount of intracranial pressure. This pressure is always dangerous, but only fatal when it breaks down the vagus and vasomotor mechanisms.

The Ophthalmoscope.

A moderate degree of intracranial pressure may be revealed by slight dilation of the retinal veins.

The signs of a still increasing intracranial pressure beyond a dilation of the retinal veins are:

1. An edematous blurring and obscuration of the nasal margin of the optic disc.
2. A similar haziness of the nasal half.

3. Finally a blurring of the temporal half, resulting in the total obscuration of the optic disc.

These are *early signs* of increasing intracranial pressure.

The term "receding papillitis" is applied by oculists to denote the retinal conditions associated with decreasing intracranial pressure.

Pulse.

The pulse rate following the accident is frequently over 110 until the shock gradually disappears. A pulse of below 60 is a sign of break in the mechanism of the vasomotor system, and is a *late sign* of increased intracranial pressure.

Respiration. The respiration, like the pulse rate, may be affected by shock and exceed 30. If the intracranial pressure increases, and the number decreases to the Cheyne-Stokes type of breathing, the prognosis is very grave.

Blood Pressure.

A high blood pressure is a *very late sign* of increased intracranial pressure. Its presence signifies an attempt of the vasomotor mechanism to force blood into the intracranial chambers, and thus into the medulla by overcoming the already existing increased intracranial pressure.

Paralysis may localize the sites of fracture of the base or extradural hemorrhage.

Lumbar Puncture.

Spinal puncture or rachicentesis is dangerous in cases of shock, if large amounts of fluid are removed. A few drops is all that is necessary for diagnostic purposes. If the fluid is clear and under pressure, frequent rachicentesis of not more than 5 c.c. are safe.

Spinal punctures are good to relieve headache, especially in fracture of the base. Spinal puncture will not relieve pressure due to localized areas of edema.

THE MECHANISM OF COMPRESSION ACCORDING TO KOCHER

1. Increased intracranial pressure first expels the excess cerebro-spinal fluid, and since brain tissue is noncompressible, it then compresses the local blood vessels so that the amount of intracranial blood is slightly lessened; since the blood in the cerebral veins is under a very low pressure, less blood will flow through them, and a slight anemia is produced. If the cerebral pressure is increased, the blood in the retinal veins is held back and a venous stasis is produced, its symptoms being headache, drowsiness and possibly stupor. The pulse, respiration and blood pressure are not affected. The retinal veins are usually much dilated.

2. Kocher's Second Stage of Compression.

If the intracranial pressure still rises, it tends to approximate the pressure in the capillaries, and so a partial anemia results. If this anemia

is local, the results are impairment of function of that area. If it is present in the medulla, a slow pulse of 60 or below will be present due to stimulation of the vagus nucleus, and a slight rise in the general arterial blood pressure, due to the stimulation of the vasomotor center causing not only a constriction of the peripheral blood vessels themselves, but especially of the vessels of the splanchnic field.

The anemia then becomes more marked. Headache is more severe, associated with restlessness and even delirium—a definite cyanosis appears. These definite, though moderate, signs of high intracranial pressure form Kocher's second state of compression clinically.

An ophthalmoscopic examination reveals large dilated retinal veins, with or without edema of the discs.

This is the best time to operate in order to relieve intracranial pressure, before the signs of medullary compression have occurred.

3. Kocher's third stage of compression clinically consists of the major bulbar signs of compression. As intracranial pressure continues to rise, it produces a greater anemia of the medulla, so that the intracranial pressure at times may equal the capillary pressure of the medulla. If it were not for the regulatory mechanism of the circulation in the medulla, such an occurrence would result in the immediate and permanent cessation of cardiac and pulmonary activity, and, therefore, the death of the patient. Fortunately, however, as the anemia becomes greater, this very absence of blood so stimulates its vasomotor center that the general arterial blood pressure is raised, more blood is forced into the medulla, and in this manner the partial anemia is overcome, at least temporarily.

Clinically, the picture is most striking, as the intracranial pressure increases until it tends to prevent the normal flow of blood into the medulla; the resulting partial anemia so stimulates the vagus center that the heart rate gradually becomes lowered to 50 and below, and the pulse to a full bounding character; the respiration becomes less and less frequent until a period of apnea or non-breathing results, due to the anemia of the respiratory center of the medulla.

The patient may not breathe for forty seconds or more. During the earlier part of this period of "down wave" the blood pressure falls slightly, the patient gradually becomes more and more stuporous, the pupils slowly dilate, and the reflexes are abolished—the results of a definite anemia of the medulla. Then, as this prolongation of the medullary anemia stimulates the vasomotor center to renewed activity, the general blood pressure is gradually raised to overcome the intracranial pressure until the blood is forced into the medulla, the heart rate increases, and then the patient begins to breathe

again, as a result of the respiratory center being resupplied with blood.

During this period of "up-wave", the cyanosis is extreme, the pupils contract, and the patient may groan, become restless and even conscious. The reflexes return, and the ophthalmoscopic examination reveals double papilledema or "choked discs", thus the intracranial pressure is so high that the resulting anemia produces an edema of the optic nerve discs, so that their margins and entire discs themselves are obscured, the retinal veins are dilated, and at times buried in the edematous retina. Even the other extracranial veins of the scalp and particularly of the upper eye-lids are dilated.

As the medulla becomes supplied with blood again following this period of "up-wave", the stimulation of its vasomotor center is lessened so that gradually the general arterial blood pressure diminishes until the symptoms and signs of the "down-wave" become more and more marked; then the "up-wave" begins again, as outlined above, and this periodicity of symptoms and signs depending upon the rise and fall of general blood pressure, causing the Cheyne-Stokes type of respiration (Fraube Herring waves) occurs again and again. This condition may continue for hours.

4. *Kocher's Fourth Stage of Compression.* Unless the intracranial pressure is now quickly relieved by an operation (and even with an operation the chances of recovery at this stage of compression are slight) this regulatory mechanism of the medulla will finally become fatigued so that the vasomotor stimulation will no longer be able to raise the general arterial blood pressure above the intracranial pressure, and during the "down-waves", a permanent fall of blood pressure will occur; the respiration will no longer begin again, and the heart will continue to beat irregularly and rapidly as a separate organ, until the blood pressure gradually falls to zero, so that even the heart itself will cease beating.

This stage of respiratory paralysis, associated with rapid and irregular cardiac efforts, dilated pupils, profound coma, and complete muscular relaxation, and a permanent fall of general arterial pressure, forms Kocher's fourth stage clinically of permanent anemia of the medulla—the stage of loss of compensation or the terminal stage always resulting in the death of the patient.

TREATMENT

1. Rest and elimination of all external stimuli are the first steps.
2. Elevate the head with one pillow if hemorrhage is suspected. If hemorrhage is ruled out, and the shock is the predominating feature, lower the head and elevate the feet.

3. Gastric lavage will thoroughly relieve the stomach of its contents if patient is vomiting, and is beneficial if complicated with alcoholism.

4. Small repeated hypodermic injections of morphine, 1/6 or 1/8 gr., are more useful in insuring quietness to excitable and delirious cases, but it may mask all symptoms of intracranial pre-hemorrhage and is of no value to patients in coma.

5. Drastic cathartics are contra-indicated in shock, and when the patient is unconscious, daily soap suds enemas are very beneficial and may lower the blood pressure 10 to 15 degrees. Vigorous catharsis may be indicated later.

6. An ice bag surrounding the head is empirical, and may in a small way lessen cerebral circulation. Its value, however, in cases of extreme oncoming edema of the brain is questionable. Lister tubes themselves could hardly compete with the extensive inflammation. However, if the patient is conscious, the ice bag is very beneficial to relieve the throbbing pain in the head.

DRUGS

1. Ergot has been recommended to produce an anemia of the cerebral vessels. In severe cases, its action would be very meager. It may be of some value in mild cases.

2. Urotrophine is recommended by S. J. Crowe in his article in *The Johns Hopkins Bulletin*, April, 1909. It is supposed to render the cerebro spinal fluid bactericidal. It is used by very few surgeons now.

3. Iodides are said to produce a plastic exudation and encourage healing.

4. For restlessness and sleeplessness without pain, bromides, veronal and luminal may be given.

In fractures through the middle and anterior fossa, efforts to prevent infection should be made. The mouth should be kept clean. If there is a rupture of the tympanum, and discharge of the bloody cerebral fluid, the ear should be guarded against infection. It is customary to irrigate the external auditory meatus with antiseptic solution, and lightly close it with sterile gauze (5000 to 2000 mercury b'chloride). Cases in which this is practiced, however, seem to do no better than those in which the ears are not treated. There may or may not be infected material on the outer surface of the tympanum—usually there is. If present, it is doubtful if it can be washed away by irrigation, while irrigation may drive it through the wound of the tympanum. The important matter is that the cerebro spinal fluid leaking out through the fracture into the middle ear, and then through the ruptured tympanum, shall have free escape.

If the current is continuously outward, infection and meningitis need not be feared, but aspiration of fluid that has once passed through

the tympanum, back into the middle ear again, is of great danger. This condition is brought about by changes in the position of the patient turning the head with the injured side up, and by the outer canal becoming occluded by dried discharges. *Unless irrigation is done very carefully, there are positive dangers in it, and it is possible for an occlusive plugging of ears to be a decided menace.*

When the wound which made the fracture compound has healed, and cerebral fluid ceases to flow, the greatest danger has passed, but it not uncommonly happens that infection has already passed in, and is working its way to the meninges. These patients should be kept quiet until the symptoms have all disappeared. Usually, if there has not been much hemorrhage or exudation, this is a matter of about three weeks. The fracture may be regarded as healed in four or five weeks.

The average case of traumatism sufficient to produce a profound central hemorrhage of the brain is usually accompanied with a complete loss of consciousness, and makes but few localizing signs, so that one is forced to wait, much as in the type of apoplectic seizures. If hemorrhage extends into the ventricles, tapping and drainage may be attempted.

SUMMARY

1. Any scalp wounds which are the result of direct violence should be considered a potential skull fracture until proven otherwise.

2. Patients with skull fractures do not stand a general anesthetic well.

3. Cases of fracture of the base are poor operative risks.

4. When to operate:

- a. When a diagnosis of extradural hemorrhage is made.
- b. In severe oncoming edema of the brain.
- c. In depressed or compound depressed fracture of the skull.

5. When not to operate:

- a. In cases of fissure fracture without localizing symptoms.
- b. In the presence of shock.

6. The gravity of the injury depends upon the amount of damage to the brain substance

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HYPERTROPHIC ILEOCECAL TUBERCULOSIS*

WITH REPORT OF CASE SUCCESSFULLY
OPERATED ON

WALTER H. BAKER, M.D.

AND

M. W. LYON, JR., M.D.

SOUTH BEND

Hypertrophic or, as it is also called, hyperplastic ileocecal tuberculosis designates an unusual but not particularly rare form of intestinal tuberculosis distinguished in addition to more or less evident characters of tuberculosis by marked connective tissue formation, great thickening of the gut wall simulating a neoplasm and narrowing of the gut lumen. The condition is usually treated of in most works on surgery and on pathology, but cases are comparatively rarely seen as judged by published reports. The case here reported is the first that has come to our personal notice. American literature contains records of about 75 cases. In European literature reports of cases are more numerous, Hartmann in 1907 analyzing 229 operations. Many cases are probably hidden in writings dealing with general abdominal surgery such as W. J. Mayo's eleven cases, and so have escaped bibliographers.

The earliest published records which we have found referring to the condition are those of Czerny, 1889, Durante, 1889, Fink, 1890, and Billroth, 1891. Undoubtedly the condition had been seen before but had been unrecognized as tuberculosis, being probably interpreted as a true neoplasm. Probably some surgeons of 25 to 30 years ago have operated on the condition with the mistaken idea that a neoplasm had been removed and the patient cured of a malignancy instead of an infectious process.

The etiology of ileocecal hypertrophic tuberculosis is the same as that of any other form of intestinal tuberculosis, the lesion occurring in the same portion of the gut as the more commonly found ulcerations. A concomitant pulmonary or other form of tuberculosis may sometimes be associated with the lesion, but in most reports it is said to be absent or else is not mentioned, implying that if present, at least it was not conspicuous. It is probable that the hypertrophic form of ileocecal tuberculosis represents a special resistance to tuberculosis on

the part of the patient. The general absence or at least inconspicuousness of pulmonary or other forms of tuberculosis in these patients indicates that their resistance to tuberculosis is good. Several authors have referred to the difficulty of finding tubercle bacilli in the lesions. We demonstrated them in our own case, but did not find them abundant. In the majority of cases reported, the disease appears to be primary, but it is not unlikely that if a thorough examination had been made or could have been made, old or latent lesions might have been found elsewhere. Many of the cases operated upon have developed pulmonary or other forms of tuberculosis later.

The gross appearance of a typical example of hyperplastic ileocecal tuberculosis is so well shown in the illustration of the case here presented that no detailed description is necessary.



Drawing by Aitken
Cecal Hyperplastic Tuberculosis
(Drawing taken from fresh specimen as removed)

The neoplastic-like structure is firm and rather hard. The lumen of the gut is all but obliterated. No areas of softening are present. Not all cases are so uniformly hyperplastic. Authors report cases in which much softening and abscess formation have occurred and even perforation of the gut wall. The lymph nodes adjacent to the lesion nearly always show tubercular

*Presented before the Section on Surgery of the Indiana State Medical Association, Indianapolis session, September, 1921.

changes, and evidence of tubercular peritonitis is nearly always present. In the case here reported small tubercles were present on the cecum, and the adjacent lymph nodes were enlarged and tubercular. Bacilli were demonstrated in the latter. The most common site of the lesion is about the cecum or just distal to it. Sometimes it is so far removed as the hepatic flexure of the colon. Much less often the ileum contains the lesion. The lesion is ordinarily solitary, but Hartmann illustrates one case in which as many as three distinct lesions were present in the colon.

Microscopically the lesion is characterized by marked connective tissue increase in the submucosa, the muscularis and the serosa. There is much small round cell infiltration, an abundance of epithelioid cells, and scattered single or multiple tubercles with giant cells. In our case distinct tubercles while present were not abundant, but the fibrous tissue formation and epithelioid and round cell infiltration were marked. The mucosa is not often affected. In our case it was uninvolved. Scattered tubercles or groups of them are of frequent occurrence in the serosa and adjacent portions of the gut. In our case many small tubercles were found beneath the serosa of the cecum. These do not appear in the illustration. The lymph nodes in the drainage area of the lesion are hypertrophied and contain tubercles. The lymph nodes in our case showed tuberculous lesions but without evident caseation.

Hypertrophic ileocecal tuberculosis occurs with about equal frequency in the two sexes. Of 217 cases tabulated by Hartmann 105 were males and 112 females. Of 81 cases listed by Crowder 39 were males and 42 females. The slightly greater incidence of females is probably associated with the slightly greater incidence of females in the average population.

The most frequent age incidence for hyperplastic ileocecal tuberculosis is between 21 and 40, about 62.5 percent occurring during these two decades. No cases are reported during the first decade. About 12.5 percent occur in the second decade and the remaining 25 percent occurring in the fourth, fifth, and later decades. Gage and Hunt's patient of 71 years, male, appears to be one of the oldest reported.

The clinical diagnosis of hyperplastic ileocecal tuberculosis appears to be difficult. In reports of cases the preoperative diagnosis is seldom stated. We do not recall that any author has made a definite clinical diagnosis of hyperplastic ileocecal tuberculosis. The diagnosis of appendicitis as in our own case has been made, as well as carcinoma. Hartmann in 1908 says: "An absolute *diagnosis* is usually impossible". W. J. Mayo (p. 256) says: "Eleven of the resections were for hypertrophic tuberculosis with well marked tumor, and in the majority it

was difficult to differentiate them from carcinoma at the time of operation"; and (p. 260) "The hypertrophic type of tuberculosis, which gives rise to an infected tumor and cannot be differentiated from cancer except with a microscope." The usually earlier age incidence of hyperplastic ileocecal tuberculosis and a possible antecedent or concomitant tuberculosis elsewhere would appear to be the only means of differentiating clinically the condition from carcinoma of the same region. In addition to chronic forms of appendicitis it may be mistaken for diseases of the right kidney, ureter, and female organs of generation. The symptoms incident to a narrowing of the gut should be of value. Administration of a barium meal for roentgenologic examination would appear to be a dangerous procedure in a case with as much narrowing as in the one reported. An enema, used in the present case, should be without danger and prove of diagnostic value. The slight elevation of temperature reported in some cases is of little diagnostic import, but one would not expect to find it in carcinoma. The condition is so rare in comparison with diseases with which it may be readily confused that the diagnosis for the most part will probably rest with the surgeon at time of operation and with the pathologist.

The treatment of hypertrophic ileocecal tuberculosis is entirely surgical. The most favored operation is resection of the affected portions of the intestines and the mesentery associated with them and a lateral union of ileum and colon. A few operators have performed ileostomy, or ileocolonic anastomosis, with resection at a later period. In Hartmann's summary of 229 cases operated on, 137 had complete or partial resection and anastomosis at time of first operation. The average immediate mortality of the entire series was 20 percent. Many subsequent deaths occurred from pulmonary, intestinal, or peritoneal forms of tuberculosis. Hartmann, 1908, outlines the treatment as follows: "The ideal treatment consists in resection, for alone it surely does away with the tuberculous focus. Unfortunately it is not always possible, owing to the patient's general condition prohibiting a serious operation, or on account of local conditions (extensive and tough adhesions, disseminated tuberculous lesions of the peritoneum, involvement of numerous lymphatic glands, strictures widely distant one from another, etc.)". In the comparatively small number of American cases reported with sufficient detail, there was an immediate mortality of 10 percent or a little over. An additional 10 percent died subsequently of some other form of tuberculosis, occasionally dying of tuberculosis without leaving bed following the operation. The most successful series of cases is the eleven reported by W. J. Mayo with

no mortality. The later history of these patients is not stated. The case herewith reported has remained well up to the time of writing, a period of one year.

CASE REPORT. Male, 24 years, Jewish peddler, married, with three children, all living.

Complaint—Pain in right side of abdomen associated with vomiting and constipation.

Family History—Good, no tuberculosis, no cancer.

Personal History—Always been well as rule, usual diseases of childhood, works hard, only rarely sick with colds and minor ailments. Never constipated until recently.

Present Illness—April, 1920, first noticed constipation, began to have sudden cramping abdominal pains, mostly above the umbilicus and more in the midline than to either side, associated with nausea and vomiting. Says he had no fever, took cathartics without relief. At first attack consulted a physician, who diagnosed appendicitis and advised operation. Had subsequent attacks. On May 6 during one of these attacks consulted the senior author.

Physical Examination—Man of small stature, but looks strong, does not appear sick, but has a pinched, nervous expression. Says he has not lost weight. Temperature 98° F.

Oral cavity: Negative except for a few carious teeth.

Throat: Negative.

Chest: Negative.

Abdomen: Walls strong and muscular, not distended in one part more than in another. A hard mass with rigidity of the muscles and moderate but not excessive tenderness about 2.5 inches to right of umbilicus. Mass was not movable and could not be palpated by finger in rectum. No tenderness, no other masses in other parts of abdomen.

Diagnosis—Appendiceal abscess.

Operation and Findings—May 6, 1920, through an extended incision, a mass of about the size of a lemon, with the omentum about it was revealed. It was very hard but was easily moved about with the colon. It was located about 2 inches above the ileocecal valve. There was no pathological involvement of the surrounding tissues except two enlarged lymph nodes about the size of a filbert in the omentum near the attachment by adhesions to the mass. Except for these few adhesions of the omentum about the mass there were no adhesions in the abdomen. The appendix was normal. Having no permission from the patient or family to remove more than the appendix, this organ was removed and the abdomen closed. The mass was diagnosed as malignancy of the colon. The patient made an uneventful recovery. Permission was later obtained to do a resection of the mass. On June 15, 1920, a second operation was done. Distal portion of ileum, cecum and

proximal portion of colon were excised and the ileum united with the colon by lateral anastomosis. From this second operation the patient made an uneventful recovery and at time of writing, one year later, is in good health.

Laboratory Findings—June 9, 1920. Wassermann reaction negative with plain and cholesterolized antigens. Roentgenologic examination of the colon by barium enema shows descending portion below splenic flexure partially filled, probably due to gas accumulation, transverse portion completely filled, and with normal haustration. At the junction of transverse portion with hepatic flexure there is an apparent obstruction and no filling of the first portion.

Macroscopic Findings of Removed Mass—Specimen consists of 75 mm. of normal ileum, a nearly normal cecum (on parts of it are small, 1 to 3 or 4 mm. slightly elevated tubercle-like bodies and it shows a recent appendectomy scar with suture still in place) and 300 mm. of colon above the ileocecal valve. The greater portion of the colon is normal in appearance except that 100 mm. above the valve there is a marked constriction, 40 mm. in length. The lumen of the constricted portion is from 2 to 5 mm. in diameter, the thickness of the gut wall is firm and apparently infiltrated with a firm whitish growth, streaked with reddish. A few small, scarcely enlarged lymph nodes are loosely attached to the colon in the vicinity of the constriction. (See illustration.)

Microscopic Findings of Removed Mass—The mucosa shows no essential pathologic changes. The lymphoid tissue of the submucosa contains a few characteristic tubercles. The outer portion of the submucosa and the part corresponding to the inner muscular fibers shows much well developed fibrous tissue in bands running in various directions and enclosing more or less circular masses of lymphoid cells, or else small collections of tubercles. The outer muscle fibers are invaded by a few lymphocytes and a few tubercles. The serosa shows considerable fibrous tissue and a few tubercles. Sections of the lymph nodes associated with the colon near the stricture contain many tubercles. Sections of the gut, and of the lymph nodes stained by Spengler's method show a few acid-fast bacilli in the lymph nodes and a few in the tubercles of the lesion of the gut.

Summary—Hypertrophic ileocecal tuberculosis is a well defined pathologic entity, characterized by tubercular tissue having marked connective tissue increase, attacking the gut usually about the cecum or just beyond, or the ileum near the cecum, as a single lesion, rarely more than one, causing marked narrowing of the lumen and having a strong macroscopic resemblance to a neoplasm. Clinically it is recognized with difficulty, a positive diagnosis usually being made by microscopic examination only. The

treatment is surgical with resection of the diseased portion of the gut and lateral anastomosis of the severed portions. The immediate post-operative mortality is about 10 percent; while probably an additional 10 per cent die of some acute form of tuberculosis. A typical case with operation and recovery is reported.

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DISCUSSION

DR. J. H. EBERWEIN (Indianapolis): This condition attracted little attention until twenty-five years ago, although a localized tubercular deposit causing thickening of the coats of the cecum had been pointed out as long ago as 1849. Czerny of Germany and Durante of Italy made excisions of tubercular ceca some thirty years ago, but the real interest in the condition began in 1891 when Billroth in Vienna and Hartmann and Pillet in Paris announced that what had often passed as cancer of the cecum was really tuberculosis, capable of excision with prospect of permanent relief.

Most writers consider two varieties of cecal tuberculosis—the ulcerocaseous and the hypertrophic. Demonlin at Paris in 1905 pointed out the existence of an ulcerative form, a hypertrophic form and an enteroperitoneal form. As Hartmann says, the whole of the ileocecal region is lost in the ulcerative form, interspersed

with caseous matter and even purulent tuberculous cavities communicating sometimes with the intestinal tract. This condition is relieved by exclusion through anastomosis. The hypertrophic form is the so-called tubercular tumor of the cecum. It is usually more or less mobile in the iliac fossa, and is often included in a fibro-adipose mass which attains a thickness of 3 or 4 cm. It is of much interest because so often mistaken for carcinoma, and because it is so amenable to surgical treatment.

In the etiology most writers state the probability of its being primary, but I noticed in the case reports that the physical examination shows lungs normal, except some slight dullness, a few rales or rubs at the base, etc. It is my opinion that later we will discover it is nearly always secondary to pulmonary tuberculosis.

Pathology:—The condition usually involves the cecum, sometimes a part of the ileum, but may involve any other part of the colon. There may be one tumor or more. It has been necessary to remove the whole colon to get a cure. In Dr. Baker's report the condition seemed to involve more the serosa and subsera, and the mucosa was not involved. Vegetation and polyoid masses may form in the lumen of the cecum. One assumption is that the tubercle bacilli pass through the intact wall of the intestine, usually the ileum, without leaving any trace of their passage, and enter the mesenteric and retroperitoneal lymph nodes, giving rise to symptoms of tuberculosis of these structures.

Symptomatology:—In the incipient stage there are indefinite gastro-intestinal symptoms accompanied by pain and tenderness in the lower abdominal quadrant. In the second stage we find a readily palpable and movable cecal tumor with symptoms of a low grade localized abdominal inflammation. In these two stages fever may or may not be present. In the third stage symptoms of obstruction dominate. An x-ray examination should always be made, excepting where acute obstructive symptoms are present.

The treatment is both medical and surgical. These cases should be treated medically both before and after operation and given practically the same medical treatment as other forms of tuberculosis. Heliotherapy should be used both before and after operation. There are some differences of opinion as to surgical treatment. Although most men prefer excision and anastomosis, as was done by Dr. Baker, some prefer ileocolostomy with or without intestinal exclusion in the majority of cases; first, because the mortality is greater in excision than in simple ileocolostomy, and second because the latter will cure most cases. Intestinal exclusion is combined with the ileocolostomy where the disease involves a great deal of the gut wall. If

the disease is still more extensive, ileosigmoidostomy can be performed as advocated by Lane.

Dr. A. S. JAEGER (Indianapolis): As the doctor says, many of these cases are diagnosed as chronic appendicitis with adhesions, and this paper will make us remember that at times it is best not to make absolute preoperative diagnosis, because we have all had the experience of sometimes not finding things in the belly as they seem to be from the outside.

I believe Dr. Baker has been taught a valuable lesson in that I do not believe in future he will operate a case with permission simply to do one thing. It has been many years since I have operated anyone unless I have had consent to do that which I found best and necessary to do. If Dr. Baker had operated this case with consent to do whatever he could do, he would not have had to operate the second time. So it behooves us to get the practical points from his paper as well as the scientific points.

DR. JOHN W. SLUSS (Indianapolis): I have seen three cases of tuberculosis of the cecum, all occurring in my service at the City Hospital. They were all in foreign-born individuals, and I had a very strong impression from my study of these cases that diet had a great deal to do with the development of the condition, because these individuals whom I saw had lived upon a very indifferent sort of diet, and I thought their mode of life together with their diet had much to do with the origin of the disease. In other words, that the cecum acted as a sort of trap, a sort of cesspool, which gave the tubercle a chance to develop and take hold upon the mucosa of the cecum.

My opinion, further, is that these cases were nearly all primary in the cecum. That is, that hypertrophic tuberculosis of the cecum is merely an end process, and that the trouble begins as a simple ulceration of the cecum; that it is not an active process; that it develops very slowly, and the attempt of nature to circumscribe it and wall it off results in the formation of a great amount of scar tissue, so that the connective tissue formation is merely one of the end results of the ulcerative process. The surprising thing in these cases I have seen—I have operated only one myself—was the motility of the tumor, which has been mentioned by the essayist. One would expect that with a process which has manifestly continued so long and which involves such an extensive part of the abdomen, there would be extensive adhesions; but usually the tumor is quite motile and there is no difficulty in the excision.

I want to emphasize the fact that in my opinion the trouble is local in its origin, and that there is not necessarily a primary focus in some other part of the body.

DR. B. VAN SWERINGEN (Fort Wayne): I want to refer to a case in the hospital now in which the diagnosis before operation was cecal

tuberculosis. The patient was a young girl about nineteen years of age who had lost considerably in weight recently; within the last few months she had lost twenty pounds. The symptoms were those of general weakness, with the exception of a diarrhea which had persisted for two months, following a sojourn at a little lake in the northern part of the state, which it was thought was due to improper food. However, the apparent anemia, the loss of weight, and a temperature of 101 to 101.5 led us to suspect tuberculosis immediately. There was no cough, but on examination of the chest there were a few rales on one side and some impairment of the percussion note with enough harshness of the respiratory murmur to make a chest expert suspect very strongly that there was a pulmonary lesion. However, examination of the little sputum we were able to collect was negative. While she was under observation she passed a little blood in the urine a time or two. Examination of a centrifugalized specimen revealed acid fast bacilli in the urine. There was a mass in the right side of the abdomen corresponding to the mass often felt in appendiceal disease, especially acute appendicitis with adhesions. She was operated a few days ago and the tuberculous infection was found to be in the ileum, not the cecum. The appendix was not diseased, but the process extended up at least six inches on the ileum and away from the appendix, not on the side of the large bowel at all. There was no involvement of the wall of the cecum.

I simply mention this to show that "tuberculosis of the cecum" may be found in the small gut.

DR. GOETHE LINK (Indianapolis): It has been my fortune to meet with two cases of tuberculosis of the cecum, a condition which looks very much like cancer. We find, however, that in tuberculosis of the cecum there is usually no increase in peritoneal fluid, while in carcinoma there is always a great increase in peritoneal fluid. That will help us in making a diagnosis, for it must be made on the spot and usually from the gross appearance. In my cases there was not sufficient obstruction to demand resection and I removed the appendix and closed the abdomen. The patients were then sent to a southern climate and treated as if they were suffering from pulmonary tuberculosis, and both recovered.

In view of the large mortality percentage from the surgical treatment of this condition, it is my opinion that unless the gut is so damaged as to cause obstruction, this condition should be treated medically and not surgically.

DR. W. H. WILLIAMS (Lebanon): A short time ago a young man came under my observation with an abdominal condition for which he had been previously operated. He was thirty-

three years of age. About five months before I saw him he had been operated under another service for appendicitis. While in the hospital following this operation he seemed to do very well, but after going home his old symptoms returned—pain in the umbilical region with more or less disturbance of digestion and a general feeling of illness. No temperature present, no abdominal fluid, and but slight loss of weight. Finally he came into our service and upon examination I found an elongated mass in the right side extending well up to the edge of the liver. An examination of the lungs did not reveal any pulmonary condition, so we decided that we would make an exploratory incision and see whether or not that was a tubercular mass. That was done. We found tubercular involvement of the cecum extending almost to the hepatic flexure, and extending out on the ileum for a distance of twelve inches. We thought with that condition we could not make an anastomosis nor remove the cecum and that part of the ileum involved, so we simply closed the abdomen and followed with general treatment. He seemed to improve for about four weeks, had a good appetite and gained some flesh, but he soon dropped back to the same old train of symptoms, and immediately following that, pulmonary symptoms presented, and between three and four months after operation he died—a typical case of pulmonary tuberculosis.

DR. WALTER H. BAKER (closing): As has been said, the question of diagnosis from the gross specimen as the surgeon views it, with the abdomen open before him, is very difficult to differentiate from cancer. Yet the following points in my case and in the report of other cases should be considered:

The cecum is mobile, quite freely so, mass and all.

There was a lack of free fluid in the peritoneal cavity.

Localization of the disease seemed more marked than in malignancy. There may be other points brought up from a more careful and accumulative study of cases, over years of time, that will make it possible for us to make a positive diagnosis before operation. This we all hope for.

As I listened to the discussion I could not help but wonder how many cases of hyperplastic ileocecal tuberculosis had been removed for cancer and a recovery followed, and a cure charged up to the surgery of cancer. Likewise how many such growths had been left *in situ* and the death charged to malignancy. This subject therefore is well worth our most careful attention.

**THE JOURNAL
OF THE
INDIANA STATE MEDICAL ASSOCIATION**

Devoted to the Interests of the Medical Profession of Indiana

ALBERT E. BULSON, JR., B.S., M.D., F.A.C.S.
Editor and Manager

Office of Publication, 406 W. Berry St., Ft. Wayne, Ind.

August 15, 1922

EDITORIALS

THE DEATH OF DR. WYNN

For the third time within the last few months the Indiana medical profession loses one of its most prominent members through the tragic death of Dr. Frank B. Wynn, of Indianapolis, which occurred in the mountains of Glacier Park, Montana, on July 27. No Indiana physician stood higher in the esteem of the medical profession and his fellow citizens than Dr. Wynn, and his loss will be felt by innumerable activities which received his attention. His name was identified with many civic movements, though at no time did he lose sight of professional affairs as was evidenced by his connection with medical societies every one of which signally honored him, and with the Indiana University School of Medicine in which he long occupied a prominent position as teacher. It was his love of nature and interest in outdoor recreations that led him many years ago to join the American Society of Mountain Climbers, and it was his indulgence in the pastime of that society which finally led to his tragic death. One of his early achievements which brought him distinction in the medical world was the creation of the Scientific Exhibit of the Indiana State Medical Association. It was the general excellence of this work which finally led the American Medical Association to establish as a permanent feature of annual sessions a Scientific Exhibit over which for many years Dr. Wynn presided with signal honor to himself and great benefit to the physicians of the country. He had been honored by numerous societies, which included the presidency of the Indiana State Medical Association, the Indianapolis Medical Society, the Mississippi Valley Medical Association, and first vice-presidency of the American Medical Association. He also had served as president of the American Mountain Climbing Club, the Indiana Centennial Commission, and numerous other civic, professional and social organizations. He was the author of many valuable scientific papers and at the time of his death had just completed a series of articles on "The Physician" which had been running regularly in this Journal throughout the past two years. In fact it was immediately prior to his departure for the West where he

met his tragic death that he completed arrangements for the publication in book form of this series of articles. As a practitioner of medicine he was singularly successful. For many years he limited his practice to internal medicine and enjoyed a large consultation practice. His patients learned to love him not only because of his scientific ability but because of his very lovable and sympathetic disposition, and medical men everywhere held him in the highest esteem. His untimely death at sixty-two years of age creates a loss which it is hard to fill, and as we had occasion to say at the time of the tragic death of another prominent physician, "the medical profession has lost one of its truly great men".

HAY FEVER

The vast army of hay fever victims has looked to the medical profession for years to bring them some relief, and there is gradually accumulating evidence that their hope has not been without foundation. The road to their improvement was opened by studies in allergy which showed these conditions to be expression of human hypersensitiveness. Their treatment by gradual immunization naturally followed forthwith, and its results while far from perfect augur well for ultimate success.

The use of the various pollen extracts, polyvalent or univalent, is now more than ten years old and the number of cases treated furnish statistics worthy of consideration. In the reports of 8,000 cases, collected from various sources, approximately 25 percent are said to be entirely relieved, 50 percent made comfortable, and the remaining 25 percent not materially relieved if at all. As a general procedure timothy pollen may be used for the "spring" type and ragweed for the "fall". Many prefer the polyvalent extracts in both cases, but the fact is that either because of their more common occurrence or because of their greater activity the two mentioned cause the vast majority of hay fever cases.

Immunization should be begun early, the injections being given at five-day intervals and so timed that the maximum dose is reached shortly before the individual's "season" begins and then continued through the season at ten day intervals. Reactions to the extract are rarely of any consequence and may be controlled readily by epinephrin when necessary.

Failure to immunize the first year should not discourage one, for it is frequently possible to obtain the desired result by perseverance throughout the second or even third year. On the other hand, permanent immunization should never be promised the hay fever victim, for relapse in apparently immunized patients frequently occurs. Hay fever patients frequently

"outgrow" the disease, *i. e.*, immunize themselves, and it is best to continue the process of immunization yearly until such fortunate outcome may be reasonably hoped for.

One of the early obstacles to the success of this method of treatment was the instability of pollen extracts. This, luckily, has been overcome, and extracts potent for six months are obtainable. At first glance it would seem wise to employ only freshly prepared extracts, but the published statistics show little if any difference in the results of cases treated by freshly prepared extracts and those prepared commercially.

Explanation of the resistant cases is still lacking, for many of them do not seem to differ in any respect from those most successfully treated. Greater experience in the graduation of doses, in determining the intervals between injections, and possibly greater familiarity with the wide variety of imminical substances to which the human animal may be hypersensitive, will eventually add the unsuccessfully treated to the list of those entirely relieved.

SUPPORT THE COUNCIL ON PHARMACY AND CHEMISTRY

As evidence that doctors are easily duped we cite the following incident which we know to be true:

Very recently a representative of a comparatively little-known firm, manufacturing pharmaceutical specialties, has been calling upon the Indiana doctors and leaving samples of a pharmaceutical specialty that has *not* received the approval of the Council on Pharmacy and Chemistry of the A. M. A. In fact the preparation, of unknown formula, has all the ear marks of being worthless, and like all preparations of that kind is sold at an extravagant price. The representative who is calling on the Indiana doctors does not hesitate to say that his firm has absolutely no use for the Council on Pharmacy and Chemistry of the A. M. A., and that the doctors should pay no attention to the Council's findings. As an evidence that doctors are listening to this talk, we happen to know that many are prescribing this preparation of unknown formula, and probably worthless, and the agent is boasting of this fact—all of which leads us to remark that when doctors persist in being so gullible, to say nothing of being so inconsistent in the practice of their profession, is it any wonder if the people lose confidence!

In the first place, no doctor is justified in prescribing a preparation, the character and ingredients of which are unknown to him. In the second place, even the published formula does not always tally with the real formula, proof of which has been determined many times. The Council on Pharmacy and Chemistry of the A. M. A. is a clearing house for the medical

profession, and its findings are not only unbiased but thoroughly dependable. Not only should the medical profession support the Council, but it should be guided in every instance by the Council's findings. The doctor who follows the dictates of a pharmaceutical house, which ordinarily has no more interest in the medical profession than that which brings in dollars and cents, is untrue to his professional calling. When he prescribes preparations of secret formula, and the merits of which he knows nothing, he stoops to the plane of the quack. The American Medical Association has furnished a safeguard by establishing the Council on Pharmacy and Chemistry, and every doctor who prides himself upon being rational and honest in the practice of his profession ought to appreciate the efforts of the Council in affording him protection, and be guided by the findings of that body. Whenever a glib salesman offers a proprietary preparation, the first question asked should be, "Has the preparation been approved by the Council?" If the salesman or detail man admits that the preparation is not approved, then refuse to have anything to do with it. On the other hand, if the claim is made that the preparation has been approved by the Council, make sure that the man is not lying about the matter, as it is a well-known fact that some detail men claim that certain preparations have passed the Council when such is not the case.

"LE CADUCEE"

London's medical profession has been perturbed by an English version of the remarkable play to which Baron Henri de Rothschild, under his pen name of André Pascal, has given the title "Le Caducee." The central figure of the play, one Dr. Armand Revard, is a fee-splitting surgeon who, of course, performs unnecessary operations for the sake of a fee. Revard, like his American prototype, craves notoriety and invites newspaper representatives to his operations. One of Revard's victims is an American woman who dies. Threatened with exposure and learning that the patient he has killed secretly loved him the charlatan commits suicide. Ethical medicine is represented in the play by two decent doctors who give voice to the high principals of our profession. The English title of the piece is "The Risk." The following illuminating comment on the French title occurred in the *London Telegraph*:

In the French version it is "Le Caducée", which requires explanation, and therefore fails to be striking or suggestive. The Caduceus is the emblem of Aesculapius, the god of all doctors, and the serpent which winds itself around the emblem typifies Prudence and Caution, while the mirror into which it looks is, of course, Truth. But there is another Caduceus which is the emblem of Mercury—a very different god, the patron of commerce and also of

those arts, not always above board or honest, which commerce brings in its train. Naturally, the identification of the two leads to some confusion among both the profession and the public at large. The devotees of Mercury worship a different ideal from that which appeals to the disciples of Aesculapius. The one set laughs at the other as out of date, the second charges the first with dishonesty.

A play which could teach the above lesson to the critic of the *Telegraph* deserves the applause and the encouragement of reputable medical men. The JOURNAL has no patience with such protests as the *British Medical Journal* made against its production. The play is not an attack upon the medical profession but it is an attack upon some of our unscrupulous members. The notoriety seeking fee-splitter is indigenous to American soil, but he flourishes in France and Great Britain as well. Baron Rothschild is a physician as is also the London producer and actor, Arthur Bourchier. These gentlemen deserve credit for having focused the attention of the public on the fact that the commercialization of medicine is of grave public concern. It is coming to the time when the wise patient will find out whether his physician is working under the caduceus of Aesculapius or under the emblem of Mercury.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

REMEMBER that the next session of the Indiana State Medical Association will be held in Muncie, on Wednesday, Thursday and Friday, September 27, 28 and 29, 1922.

THE village of Waymansville, Indiana, is without a physician since the recent departure of Dr. F. W. Kern for Cincinnati, where he entered government service. The location is a good one, and any interested doctor should communicate with Wm. Otte, Waymansville.

THE preliminary program of the Muncie Session of the Indiana State Medical Association is published in this issue of THE JOURNAL. The completed official program will appear in the September number. We hope that every member of the Association will have the official program a week before the Muncie session.

THROUGH an error on the part of our printers an insufficient number of copies of the July issue of THE JOURNAL were printed, and our files are practically depleted for that month. Therefore, if doctors who do not bind their copies to keep permanently will send in their July copies to this office, the courtesy will be greatly appreciated and we shall be pleased to furnish postage.

WE have received a cynical and sarcastic anonymous letter concerning the question of unethical advertising on the part of physicians which the writer says he hopes we will have the "guts" to publish. He admits mailing his letter away from home in order to avoid identification. We shall take great pleasure in publishing the letter if the writer will have the "guts" to give his name (not necessarily for publication) and not resort to "thief in the night" tactics in order to vent his feelings.

OUR readers know of a well known advertising slogan, "Good morning! Have you used P—'s Soap?" We desire to improve upon it by saying, "Good morning! Have you read the advertising in THE JOURNAL?" Remember that the busy housewife learns of bargains at the department stores by reading the advertising in the daily papers. You may or may not strike bargains by reading the advertising pages in your JOURNAL, but you certainly will profit by learning something that is of interest to you.

This is the time of year when doctors are called upon to treat sick babies. Most of the ailments are digestive troubles, principally diarrhea of the fermentative type. Our readers should remember that one of our advertisers manufactures infant diet materials and the firm is one of the very few that does not advertise to the laity but depends upon patronage which comes through the recommendation of physicians. Their products advertised in the medical journals have the approval of the Council on Pharmacy and Chemistry of the A. M. A.

THE secretary of the Vigo County Medical Society is "onto his job", and among other activities is sending out a series of letters calling attention to some of the things which are threatening the medical profession of today. One of these letters significantly points to one of the "weak spots" in our profession and

that is the apathy and lack of co-operation among medical men in upholding educational standards and preventing iniquitous legislation pertaining to medical licensure. The suggestion offered is that it is time for medical men to get together.

SINCE the publication of our editorial in the July number of THE JOURNAL on the subject of unethical advertising on the part of physicians, we have been deluged with letters concerning the matter. Practically all of the letters approve the suggestion that the notorious offenders be brought to book, though some of the correspondents, cynically inclined, complain about the lack of ethical conduct on the part of all physicians. For lack of space it would be impossible to publish all of the contributions that have been sent in, even though permission to do so has been given, but we will publish some of the letters in the September number of THE JOURNAL.

THE New York State Department of Health is doing a splendid work in educating the public concerning health and sanitation. Not only are the "Radio Health Hints", broadcasted from the radio station at Schenectady, valuable as educating the public, but the newspapers throughout the country are furnished with weekly health notes of timely interest and we notice that for the most part newspapers are taking advantage of the service. This is a step in the right direction in educating the public along right lines concerning public health matters and the example set by the State of New York could well be followed by the boards of health in other states.

THE Indiana Tuberculosis Association is doing a commendable work in spreading propaganda concerning the dangers of accepting treatment at the hands of charlatans and quacks and following anything but expert advice in the management of diseases. Recently the Association has printed a pamphlet entitled "The Chiropractor in the Supreme Court", in which attention is called to the ignorance and inconsistency of the chiropractic teaching as well as to the necessity of the State exercising a legitimate right in taking a forceful stand for the protection of health by requiring that all those who take into their hands the lives of others be placed under the same requirements for practice as doctors of medicine. This pamphlet ought to be of some service in educating the incoming legislators.

"The business men of Chicago have secured the services of an expert in rat extermination work in order to reduce the danger and financial loss incident to the presence of rats.

"The health commissioner has endorsed this movement and promised cooperation. Federal authorities claim that there are as many rats as human beings in this country."—*Boston Medical and Surgical Journal*, August, 1922.

Perhaps in time the profession of rat extermination will become quite popular and respectable. We may even hear of pied pipers of legendary fame, and if the rats are susceptible to the strains of music why not set a phonograph at work in our alleys with records giving forth suitable rat music and entrap the rodents while we sleep. Anyhow, a rat crusade in the cities and thickly populated communities is deserving of approval, for there is no question about the fact that rats disseminate disease, to say nothing of destroying property. As a suggestion we might offer the recommendation that municipalities could accomplish a good deal by offering a bounty for rats, dead or alive, and thus give the small boy a chance.

THE Indiana State Division of the American College of Surgeons will hold a meeting in Evansville December 4 and 5, in which Michigan will join, as also will the Ohio Valley Medical Association. This is the second annual meeting of the Indiana Division, and the Evansville doctors are well organized and have splendid plans under way for a good program and clinic. The executive officers are James Y. Welborn, Chairman, Evansville; E. M. Shanklin, Secretary, Hammond; H. O. Bruggeman, Councilor, Fort Wayne. Committees appointed for the annual session are as follows: Committee on Arrangements, Wm. R. Davidson, Evansville; W. S. Ehrich, Evansville; E. M. Shanklin, Hammond; Bleeker Knapp, Evansville. Committee on Entertainment, Wm. H. Field, Evansville; J. W. Phares, Evansville; L. D. Brose, Evansville; J. Rilus Eastman, Indianapolis. Program Committee, M. Ravdin, Evansville; Wm. E. McCool, Evansville; Benjamin Floyd, Evansville; M. R. Combs, Terre Haute. Committee on Hospital Arrangements, J. Y. Welborn, Evansville; A. M. Hayden, Evansville; P. C. Rietz, Evansville; M. Ravdin, Evansville.

A FEW months ago we chronicled the tragic death of President Stone of Purdue University, who lost his life in the pastime of mountain climbing in the Glacier National Park. At that time we commented upon the fact that mountain climbing is a hazardous undertaking and that it seemed a pity that prominent men, in the prime of life, so much needed in carrying on the world's great achievements, should indulge in such a pastime with the possibility of losing life. At that time we were criticized by Dr. Frank B. Wynn for having placed mountain climbing in the list of dangerous activities, and the editor of THE JOURNAL, half in jest and half in earnest,

said that if one would keep at mountain climbing long enough he would meet with a serious mishap. It is but a few months since this remark was made, and now we are recording the tragic death of the one to whom the remark was made, for it is very probable that Dr. Wynn would have been alive today had he not attempted the scaling of the highest peaks in Glacier National Park. A tragic end is open to any of us, but it is not necessary for us to court danger, and mountain climbing, in the light of the history of the sport, must be considered a hazardous undertaking.

THE chiropractors are good advertisers. They not only use newspapers and billboards but they use their advertising on blotters, paper bags, fans and other useful articles that are distributed gratis to the public. We also have noted in last month's JOURNAL that the churches are worked to the limit to further chiropractic delusion. Probably the next thing will be for our ministers to include in their prayers something like the following: "And, good Lord, in bestowing thy blessings upon the president of the United States and other high personages, please do not forget the members of the chiropractic faith who promise to deliver the world from all physical infirmities and inflictions—yea, even to the growing of hair on the bald heads of the deacons in our churches—through the medium of simple mechanical manipulations. And, O Lord, we beseech Thee to pour your richest blessings down upon the heads of these wonderful benefactors." In reality this may not be so much of a joke either, for we shall not be surprised if more than one minister is deluded into offering such a prayer in the sincere belief that he is increasing the chances of the sick and the maimed to become well.

THE Committee on Arrangements for the Muncie Session of the Indiana State Medical Association desire to call the attention of the golfers of the Association to the fact that there will be a Doctors' Tournament. They boast the best 18 hole course in Indiana—in fact in the West—at the Delaware Country Club, and their announcement reads as follows:

"Golfers, Attention. How about a 78 on the best 18 hole course in Indiana? Listen! The Delaware Country Club of Muncie has just opened a wonderful new 18 hole course, one of the best in the West, and they have very kindly allowed the use of it to the visiting members of the profession who are golfers and who will be present at the State Meeting in September. We are going to have a Doctors' Tournament. It will be more than likely a handicap, so we ask that you send in your name with your best scores (*of course*) as soon as possible to Dr. Frank G. Jackson, 214 East

Adams street, Muncie, Indiana, or to Dr. C. A. Leatherman, care Muncie Products Division of the General Motors Corporation, Muncie. If there are any "Old Timers" who wish to play off an old score (*or pay an old debt*), just let us know the names and arrangements will be made. "Dub" foursomes will be the specialty, and we may have a keg of nails for the best score."

A FEW months ago we published an article calling attention to the unfair discrimination against American physicians by the teaching body of the University of Vienna. We are in receipt of a further communication, dated June 30, as follows: "The American Medical Association of Vienna wishes to have you announce through the columns of your Journal, the restoration of friendly understandings between their organization and the teaching body of the University of Vienna. A special committee, elected by the Association, after a thorough investigation of the charges of discrimination against Americans, which were reported by members of our Association and published in our recent memorandum to your Journal, find that the men who made the accusations of discrimination were either unable or unwilling to substantiate these charges under oath. Further, the courses in question were not so-called book courses and consequently were not under the control of the A. M. A. of Vienna. It is the sentiment of this Association that the men of the teaching body of the University of Vienna have suffered by this unjust criticism. We further wish to state that through the efforts of our special committee, working with a like committee from the teaching body, sufficient numbers of book courses in English in all branches may be had at prices of from \$3.00 to \$5.00 per hour for the group, taking such courses."

OUR hats are off to the Vigo County Medical Society! At present a series of letters are being mailed by the Society to doctors all over the State in which attention is called to some of the problems confronting the medical profession, not the least of which is the growing menace of State Medicine. The question of keeping up the standard for medical practice also is discussed intelligently and medical men are asked to take an active part in politics with a view of preventing the chiropractors from gaining any legal recognition as qualified practitioners of medicine. The plea is made to medical men to stand for fair play and a square deal on the question of recognition of the various cults that are now imposing upon the people and representing themselves as qualified to treat the sick and disabled when we know that they are notoriously incompetent. The legislature meets next

January and it is the duty of every county medical society to follow the suggestion of the Vigo County Medical Society and have the candidates for the legislature from each county appear before the medical society of that county and tell exactly where they stand on the question of support of the present medical practice acts. In one of the letters the final rejoinder is worth remembering: "Let's get some place and be somebody. Let's fight! If we are going to permit chiropractors and such to spend their money for legislation favorable to them without a fight, why not take to some other calling where there are no battles to fight?"

THE HIGHER EDUCATION OF CHIROPRACTORS.—What is your favorite light literature? Detective stories? Mystery stories? Humor? Have you ever read the publications issued by the various species and subspecies of the chiropractic cult—for there is, as you know, a lack of unanimity among the chiropractors. One particularly choice piece of contemporary journalism is issued by a chiropractor factory in Fort Wayne, Indiana. Its July, 1922, issue makes good hot weather reading. The editor discusses a "model bill," recently drawn up by those chiropractors of Indiana who belong to a different subspecies from those represented by the publication in question. This Fort Wayne journal views the bill with disfavor. It says, with refreshing naivete:

To begin with, there is absolutely no need of a Chiropractic licensing and examining board in Indiana today. The existing lot of Chiropractors in Indiana cannot be improved upon. You are not being persecuted or prosecuted, you are left severely and strictly alone to practice your profession without let or hindrance from any source or any group of any kind. In fact, Indiana today is the best Chiropractic state in the entire country. Chiropractic conditions are as near ideal as it is humanly possible to approach that condition.

"But the fact that Indiana is the home of the free, chiropractically speaking, is not the only objection this journal has to the proposed bill. It seems that the bill would require applicants for chiropractic examination to submit satisfactory proof of the possession of a preliminary education, equal to that of a high school. Perish the thought! As the editor says:

How many chiropractors in Indiana today could qualify under that rule? Of all the Chiropractors in Fort Wayne, I do not happen to know of ONE that is a high school graduate. In fact, I believe that the total number in Indiana able to comply with that ruling would be less than two per cent of all the Chiropractors in the State.

"From the point of view of the owner of a chiropractic 'college' the sentiments just quoted are eminently logical. It would be entirely unfair to chiropractic schools to insist on matriculants being educated human beings. What educated human being would ever attend

a chiropractic school? Of course, from the point of view of public interest—but that's another story."—*Journal of the American Medical Association*, July 15, '22.

THE country now suffers from business depression and, of course, doctors along with other business and professional men feel the effects. A little more prolongation of the existing strikes, with perhaps the addition of a few more disturbances in labor circles, and this country is going to suffer some real want in the midst of plenty. Isn't it about time to put a stop to this foolishness of permitting a handful of arrogant men to cause a nation of over one hundred million people to suffer? Laborers and employers of laborers should be compelled to adjust their differences promptly when a cessation of their activities means suffering for the public. Arbitration is the fair and honorable way of settling disputes when warring parties can not settle their troubles among themselves, and we have no sympathy with laboring men when they refuse to arbitrate and insist that their demands shall be the only ones considered, as has been the case in some recent disturbances between laborers and their employers. On the other hand we have no sympathy for the employer who insists that he has a right to treat his employees as he sees fit. In the matter of furnishing such necessities as food, fuel, light, transportation, etc., the public has some rights which must be considered, and both employer and employee should be compelled to recognize this fact. At the present time there is good reason for using "the big stick" of Roosevelt on the warring factions, and we have been greatly disappointed in President Harding in noting that he has exercised altogether too conciliatory a spirit in attempts to relieve the country of actual suffering and want occasioned by the needless strikes connected with the mining and transportation business. We are not in sympathy with the idea that mining and railroad transportation of every kind should be controlled by the government. The good Lord deliver us from government owned railroads, for we have had a taste of that and it proved disastrous, such things are bound to be with the politics which would enter into such enterprises, but we are firmly convinced that the government should not only force mining and transportation companies and their employees to submit their controversies to arbitration but compel them to abide by the results. To permit them to continue a war to the bitter end is to compel the public, most vitally concerned in the outcome, to suffer unnecessarily, and it should be prevented. Such a course of action is inconsistent and should be prevented forcibly if necessary.

THE tragic death of Dr. Frank B. Wynn, beloved member of the medical profession of the state, has brought sadness to the heart of all who knew him. That his friends and colleagues may know the circumstances attending his death, we are publishing herewith, through the courtesy of Dr. W. N. Wishard, who was with Dr. Wynn's party at Glacier Park, the statement made by Dr. H. H. Goddard of Columbus, Ohio, who was with Dr. Wynn when the tragedy occurred.

FACTS CONCERNING THE DEATH OF DR. FRANK B. WYNN

On Siyeh Mountain, Glacier National Park, Montana,
Thursday, July 27, 1922.

Dr. Wynn and I left Many Glacier Hotel about ten a. m. on Wednesday, purposing to camp near the top of Piegan Pass and climb Mt. Siyeh on the morrow. We carried our sleeping bags and food on our backs. We traveled slowly and enjoyed the trip. We lunched near Morning Eagle Falls, took some pictures and ascended the Pass.

We arrived about four p. m. and made camp a few rods below the summit of the Pass. After a comfortable night we rose about daybreak and prepared breakfast. At five forty-five we started for Siyeh. We left the trail about on a level with the saddle between Cataract Mountain and the Siyeh Range. Reaching the saddle, Dr. Wynn took some pictures and we proceeded to ascend toward the visible summit. The rocks were good and we hoped to reach the high slope and also the afore mentioned summit.

Dr. Wynn was in excellent spirits and said this was just the kind of climbing he liked. We picked our way but found no difficulty and no dangerous places. Dr. Wynn was leading. He came to a point where he said, "I don't know which is the better way—to go along the rocks nearly horizontal or to climb up to the next shelf." He chose the latter. The horizontal way was entirely feasible, as I could see. I could not see the other as I was a few feet below him and to the left, but he evidently thought it better to climb up to the next shelf. He put his knee on the rock and seemed to start up. I was about to step to where he had been standing when he seemed to step back and the next instant fell headlong backwards to the shelf below—perhaps six feet down. He rolled off this and on down the mountain for quite a distance.

In my judgment he must have had a sudden physical disturbance, probably apoplexy. He could not have slipped, because there was no difficulty to cause a slip, and had he done so he would have easily recovered himself, or at the worst would have slid down feet first clutching at the rocks. He made no sign of an effort to save himself. He uttered no sound. I was looking at him all of the time and jumped to help, but could not reach him—so quick was the movement. Moreover, he had let go his ice axe, which he almost certainly would not have done had he been conscious, as it would have been his greatest aid to recovery.

I at once descended to where he lay on the rocks. He was not breathing nor was there any pulse or other sign of life. I arranged the body slightly and hastened to Many Glacier Hotel for help. I reached there at eleven a. m. The tragedy occurred at seven-thirty a. m.

A party was sent out at once and the body recovered as promptly as the difficulties would permit.

I have climbed with Dr. Wynn now for two years. He was an excellent mountaineer—always cautious

and using good judgment. He took no risks. This also makes me certain that this was not a mountaineering accident, but rather a sudden physical seizure of some kind.

(Signed) HENRY H. GODDARD.
Many Glacier Hotel,
Thursday, July 27th, 1922.

DEATHS

STELLA E. HALL, wife of Dr. J. E. Hall, of Alexandria, died May 23 at the age of forty-five years, death resulting from influenza.

LAUGHLIN O. MALSURY, M.D., of Peru, died in Chicago, July 4, at the age of fifty-five years. Dr. Malsbury graduated from the Kentucky School of Medicine, Louisville, in 1891. He was a member of the Indiana State Medical Association and the American Medical Association.

FRANK W. GARRETT, M.D., of Liberty Center, died July 17 at the age of sixty-seven years. Dr. Garrett graduated from the Medical College of Indiana, Indianapolis, in 1882. He was a member of the Wells County Medical Society, the Indiana State Medical Association and the American Medical Association.

FRANK B. WYNN, M.D., of Indianapolis, a leader among medical men of Indiana, and nationally known mountain climber, was killed July 27 in a 300-foot fall from a cliff near the summit of Mt. Siyeh, one of the highest peaks in Glacier National Park, Montana.

Dr. Wynn was born near Brookville, Indiana, in 1860. He graduated from DePauw University in 1883, and was granted the degree of Master of Arts by that school in 1886. In 1885 he graduated in medicine from the Miami Medical College of Ohio, following which he served one year as intern in the Good Samaritan Hospital. After five years in general, special and insane hospital practice, he spent the years 1892 and 1893 in Vienna and Berlin, giving emphasis to work in internal medicine, diagnosis, and pathology. Locating at Indianapolis in the fall of 1893, he was selected as the first city sanitarian of that city. At about the same time he became identified with the Department of Pathology of the Medical College of Indiana. In 1896 he organized and conducted the pathologic exhibit of the Indiana State Medical Association, and this feature of the Association's work grew to such size and excellence that in 1899 the Association appropriated money and directed Dr. Wynn to take the Indiana exhibit to that year's session of the American Medical Association. This venture was so well received by the national organization that it resulted the succeeding year in the founding of the scientific exhibit which is now recognized as a prominent and important feature of the American Medical

Association work, and for many years Dr. Wynn served as director of this American Medical Association exhibit. He was vice-president of the American Medical Association for 1921; served his State Association as president in 1914-15; was president of the Mississippi Valley Medical Association in 1920; and since 1895 has held the chair of professor of medicine in the Indiana University School of Medicine.

Aside from his activities in medical societies and medical school, Dr. Wynn has done considerable writing, notably among which is the series of articles on "The Physician" which

have run the past two years in this JOURNAL, and which are now in the course of being published in book form. Dr. Wynn's character and high ideals are splendidly portrayed in this series of articles which deal with the physician himself and his relation to the profession and his fellow men, but especially noteworthy is



DR. FRANK B. WYNN

the article in the December, 1921, issue, "The Rejuvenation of Medical Ethics", in which he gives "The Ten Commandments of Medical Ethics". These Ten Commandments later were beautifully and artistically engraved for framing purposes.

Dr. Wynn was a great lover of nature, and was a member of the Indiana Nature Study Club, president of the American Alpine Club, and president of the Indiana Historical Society. In 1911 he was a appointed chairman of the Indiana centennial commission, in which capacity he served until after the centennial celebration in 1916.

Recently he was active in putting under way the Lincoln Memorial Association. During the world war he served as a captain in the Medical Corps.

The medical profession and the public in general have suffered an inestimable loss in the death of so beloved a man, but his life and influence will be remembered for years to come.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION. Patronize these advertisers, for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

The Jasper-Newton Medical Society held a meeting at Goodland, June 30.

THE Vanderburgh County Medical Society held a meeting at Evansville, June 27.

DR. J. E. HALL, of Alexandria, is advertising his home, office and practice for sale.

THE Howard County Medical Society held its annual picnic at Cassville, June 29.

THE Jay County Medical Society held its regular meeting at Portland, July 20.

THE Huntington County Medical Society held its regular meeting at Huntington July 11.

DR. J. A. FREEZEE, of Bunker Hill, has returned from a vacation trip on Lake St. Clair.

THE Wabash County Medical Society held its regular monthly meeting July 20 at Somerset.

DR. F. E. BROAD, of Kentland, and Miss Gladys Smith, of Morocco, were married July 6.

DR. WILLIAM F. CLEVENGER and Miss Louise M. Weaver, both of Indianapolis, were married July 5.

DR. PARVIN M. DAVIS has gone into partnership with his father, Dr. D. F. Davis, at New Albany.

DR. G. E. MOATS, of Antwerp, Ohio, has moved to Fort Wayne, where he will practice medicine.

DR. JOHN J. CONNELLY, of Rockville, and Miss Harriet Hubbard, of Indianapolis, were married June 27.

DR. E. S. JONES has moved from Crawfordsville to Warsaw, where he has taken up the practice of medicine.

DR. JOSEPH HAUK, of Terre Haute, and Miss Jessie Leisure, of Oakland, California, were married June 26.

DR. I. S. MILLSTONE has removed from Gary, Indiana, to Cleveland, Ohio, where he will take up the practice of medicine.

DR. EDWARD A. SPITZKA has been appointed District Medical Officer, Second District, United States Veterans' Bureau.

DR. G. W. MACKENZIE was elected president of the Philadelphia Laryngological Society at the annual meeting on June 6th.

THE Association of Monon Surgeons held their annual convention at Michigan City, Indiana, for a week beginning July 24.

DR. GEORGE F. BEASLEY, of Lafayette, was seriously injured recently when he fell from a stepladder, falling on his head and shoulders.

DR. F. C. GUTHRIE, of Pendleton, has been appointed physician at the new Indiana reformatory during the construction period.

A \$425,000 bond issue for the erection of an administration building and nurses' home at the City Hospital, Indianapolis, has been authorized.

DR. HARRY GARTON has accepted a position on the staff of doctors at the Indiana State Home for Feeble Minded Youths at Fort Wayne.

THE members of the Fountain-Warren County Medical Society and the Ben Hur Dental Association held a picnic at Covington July 12.

DR. ELWIN CLARK, of Clarksburg, and Miss Lois Thorne, of Greensburg, were married June 18 at Indianapolis. They will reside in Clarksburg.

DR. FRANK W. KERN has moved from Waymansville to Cincinnati, Ohio, where he has accepted a position with the United States Public Health Service.

DR. C. H. LAVENDER, Assistant Surgeon-General, has announced that there are twelve hundred lepers at large in twenty-five states at the present time.

DR. F. A. CHENOWETH, of Winchester, has been appointed United States examining surgeon for Randolph County, to succeed the late Dr. C. E. Milligan.

THE Kosciusko County Medical Society held a meeting on June 29 at Warsaw. Dr. A. C. McDonald presented a paper on "Acute Troubles in the Abdomen."

A contract has been let for the building of two additional wings to the Irene Byron Hospital, Fort Wayne. This will give space for twelve additional rooms.

THE Grant County Medical Society held a meeting at Marion June 27. A lecture-slide demonstration was presented by Dr. Channing W. Barrett, of Chicago.

DR. J. F. WEIR, of Evansville, has been ordered to Fort Bayard, New Mexico, where he will assume charge of the government tuberculosis sanitarium at that place.

DR. WALTER McBETH, of Royal Center, and Miss Julia Faye Frye, of near Burnettsville, were married June 28. Dr. McBeth is practicing medicine at Royal Center.

DR. H. MONTFORD COX, of Brookston, and Miss Victorine Firsich, of Indianapolis, were married recently at Indianapolis and have taken up their residence at Brookston.

THIRTY-THREE American physicians have gone to Vienna under the leadership of Dr. George W. Mackenzie, to attend special courses given in ear, nose and throat diseases.

DR. RALPH S. CHAPPELL, of Indianapolis, is spending the summer months with Dr. G. W. Mackenzie, in the ear, nose and throat clinics of Vienna and other medical centers of Europe.

DR. FRANCIS CARTER WOOD, director of the Institute of Cancer Research, Columbia University, has announced the incorporation of the American Society for the Control of Cancer.

DR. CHARLES E. DE M. SAJOUS, of Philadelphia, has been awarded the 1922 American Medicine Gold Medal for his noteworthy contributions to the study of the glands of internal secretion.

DR. WILLIAM H. SPIETH, of Indianapolis, and Miss Viva Pearl Wilson, of Roachdale, Indiana, were married Sunday, June 25. They have taken up their residence at Lebanon, Indiana.

DR. FREDERICK C. WARNSHUIS, of Grand Rapids, Michigan, received the honorary degree of Doctor of Science from Hope College, Holland, Michigan, at its fifty-seventh annual commencement.

DR. G. E. GILLILAND has removed from Terre Haute to St. Louis, Missouri, where he will practice internal medicine. Dr. Gilliland expects to be affiliated with the Washington University Medical School.

DR. CHARLES J. HATFIELD announced his resignation as managing director of the National Tuberculosis Association at the annual meeting of the Association to take effect on October 1, 1922. He will be succeeded by Dr. L. R. Williams.

DR. F. E. WILLIAMS, of Indianapolis, has been appointed medical director of the National Committee for Mental Hygiene, with headquarters in New York City. Dr. Williams has been a member of the staff of the committee since January, 1917.

A new soldiers' hospital is to be built near the Great Lakes Naval Training Station, near Chicago, at a cost of three million dollars. A new hospital for veterans is also to be built at Camp Lewis, Tacoma, Washington, at a cost of one and one-half million dollars.

A joint meeting of the members of the Jennings, Jackson and Bartholomew medical societies was held June 27 at Columbus. Dr. Osterman, of Seymour, presented a paper on "Children's Diseases," and Dr. J. K. Hawes, of Columbus, presented a paper on "Feeding of Babies."

DR. J. MORTON HOWELL, of Dayton, Ohio, has been nominated by President Harding to be the first American minister to Egypt. Dr. Howell has been a practicing physician at Day-

ton for many years and for the past ten months has been diplomatic agent and consul general for this government in Egypt.

AT the fifty-seventh annual meeting of the Michigan State Medical Society, at Flint, June 7th to 9th, Dr. William T. Dodge was elected president; Dr. J. G. R. Manwaring, Dr. William E. McNamara, Dr. T. F. Heavenrich and Dr. W. K. West, vice-presidents; Dr. Frederick C. Warnshuis, secretary.

DURING July the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in *New and Nonofficial Remedies*: The Abbott Laboratories: Neocinchopen-AAbbott Tablets, 5 grains. Louis Hoos: Hoos Albumin Milk. Mallinckrodt Chemical Works: Benzyl Benzoate-M.C. iv.

THE annual outing of the Second District Medical Society was held on Eagle Island, in the Wabash River, July 14. Papers were presented by Drs. A. A. Rang, of Washington; F. H. Austin, of Bloomington; Homer Woolery, of Bloomington; G. C. Porter, of Linton; James N. McCoy, of Vincennes; G. D. Scott, of Sullivan; and J. W. Smadel, of Vincennes.

AN institute of public health has been established at Columbia University through the bequest of the late Joseph R. DeLamar. The work of the new institute of public health will be chiefly research and the training of research workers. Dr. Haven Emerson will fill the new office of professor of public health and administration.

THE United States Civil Service Commission announces an open competitive examination for Junior Medical Officer, Indiana Service and Coast and Geodetic Survey. Applications will be rated as received until further notice. Applicants should at once apply for Form 1312, stating the title of the examination desired, to the Civil Service Commission, Washington, D. C.

IN a recent review of the activities of the Rockefeller Foundation, President G. E. Vincent states that one hundred fifty-seven individuals held fellowships during 1921, funds for which were directly or indirectly supplied by the Rockefeller Foundation. The distribution of these fellows include: Seventy-one Americans, one Belgian, seven Brazilians, eleven Canadians, one Singhalese, seventeen Chinese, one Colombian, two Costa Ricans, nineteen Czechs, seven British, four French, one Guatemalan, one Mexican, two Nicaraguans, seven Poles, two Salvadoreans, two Syrians and one Norwegian.

THE faculty in the Harvard Medical School has made many changes. L. T. Troland, formerly instructor in psychology, has been promoted to the post of assistant professor. Dr. Reginald Fitz, formerly professor of medicine at the University of Minnesota, has been named associate professor of medicine at Harvard. Other appointments are: Dr. E. P. Richardson, assistant professor of surgery; Dr. J. Bronfenbrenner, assistant professor of bacteriology; Dr. Alice Hamilton, assistant professor of industrial medicine; Dr. G. C. Shattuck, assistant professor of tropical medicine; Dr. David Cheever, assistant professor of surgery; Dr. L. D. Felton, assistant professor of preventive medicine and hygiene; Dr. J. L. Gamble, assistant professor of pediatrics; Dr. J. S. Stone and Dr. John Homans, instructors in surgery; and Drs. William H. Smith and Frank H. Hunt, instructors in medicine.

SOCIETY PROCEEDINGS

COUNCILORS' MEMBERSHIP CONTEST

District—Councilor	No. of Counties	1921 Memberships	1922 Memberships to date	Percentage
1st—Dr. Willis	7	176	175	.99
2nd—Dr. Schmadel	7	149	145	.96
3rd—Dr. Leach	9	130	117	.90
4th—Dr. Osterman	10	138	136	.98
5th—Dr. Weinstein	5	158	160	1.02
6th—Dr. Spilman	8	150	160	1.07
7th—Dr. Earp	4	425	442	1.04
8th—Dr. Conrad	5	172	164	.95
9th—Dr. Moffitt	10	253	251	.99
10th—Dr. Shanklin	5	151	140	.93
11th—Dr. Black	6	191	191	1.00
12th—Dr. Calvin	8	241	247	1.02
13th—Dr. Berteling	8	274	254	.92
	92	2608	2582	

INDIANA STATE MEDICAL ASSOCIATION

The Program Committee has announced the following list of scientific papers for the annual session of the Indiana State Medical Association, to be held at Muncie, September 27, 28 and 29, 1922:

GENERAL MEETINGS

Thursday a. m.

Address of President: "The Status of the Profession in Indiana," Dr. William R. Davidson, Evansville.

Symposium: "Endocrinology"

- Medical Phase—G. W. McCaskey, Fort Wayne.
Discussants: Edgar F. Kiser, Indianapolis; L. P. Drayer, Fort Wayne.
- Neruological Phase—C. C. Bitler, Newcastle.
Discussants: Albert E. Sterne, Indianapolis; Charles P. Emerson, Indianapolis.
- Surgical Phase—C. M. Mix, Muncie.
Discussants: Tom Jones, Anderson; H. H. Martin, LaPorte.

Friday p. m.

Symposium: "Meningitis"

- Differential Diagnosis—Charles F. Neu, Indianapolis.
- Treatment—Miles F. Porter, Jr., Fort Wayne.
- Otitic Meningitis—Harry Boyd-Snee, South Bend.
Discussants: Robert M. Moore, Indianapolis; Earl O. Daniels, Marion; George V. Cring, Portland; D. O. Kearby, Indianapolis.

SECTION ON MEDICINE

Thursday P. M.

DISTURBANCE OF CARBOHYDRATE METABOLISM.....	John H. Warvel, Indianapolis
.....	Discussants: B. M. Edlavitch, Fort Wayne; C. R. Strickland, Indianapolis.
CONGENITAL PYLORIC STENOSIS.....	O. G. Pfaff, Indianapolis
.....	Discussants: James C. Carter, Indianapolis; W. D. Gatch, Indianapolis.
THE TREATMENT OF PULMONARY TUBERCULOSIS....	Alfred Henry, Indianapolis
.....	Discussants: Gardner C. Johnson, Evansville; Charles R. Bird, Greensburg.
THE THERAPY OF SYPHILIS.....	J. E. Luzzader, Bloomington
.....	Discussants: C. L. Bock, Muncie; Frank G. McCarthy, Terre Haute.

Friday A. M.

SENSITIVITY TO EPIDERMAL AND POLLEN PROTEINS..	James Wynn, Indianapolis
.....	Discussants: C. G. Beall, Fort Wayne; William D. Asbury, Terre Haute.
EPIDEMIC JAUNDICE.....	S. C. Waters, Middletown
.....	Discussants: W. M. Stout, Newcastle; Will P. Shimer, Indianapolis.
MEDICAL ADDRESS.....	Charles Louis Mix, Chicago
SEQUELAE OF LEHIGHARIC ENCEPHALITIS.....	W. A. Fankboner, Marion
.....	Discussants: Wier Miley, Anderson; C. A. Sellers, Hartford City.

SECTION ON SURGERY

Thursday P. M.

SURGICAL ADDRESS.....	Charles H. Frazier, Philadelphia
DRAINAGE OF INTRA-ABDOMINAL ABSCESSSES.....	J. Rilus Eastman, Indianapolis
.....	Discussants: Miles F. Porter, Sr., Fort Wayne; Wm. J. Moore, Muncie.
THYROID DISEASE.....	A. P. Rooth, Columbus
.....	Discussants: J. Y. Welborn, Evansville; F. H. Jett, Terre Haute.
GASTRIC ULCER.....	Frank W. Foxworthy, Indianapolis
.....	Discussants: W. H. Foreman, Indianapolis; H. O. Briggeman, Fort Wayne.
THE TECHNIC OF PERINEAL REPAIR WHEN ASSOCIATED WITH RECTOCELE, CYSTOCELE AND UTERINE PROLAPSE.....	F. C. Walker, Indianapolis
.....	Discussants: A. A. Raig, Washington; J. H. Weinstein, Terre Haute.
TUBERCULOSIS OF THE FEMALE GENERATIVE ORGANS.....	E. E. Padgett, Indianapolis
.....	Discussants: Carl Habich, Indianapolis; G. B. Jackson, Indianapolis.

Friday A. M.

OCCIPUT POSTERIOR POSITIONS.....	A. M. Mendenhall, Indianapolis
.....	Discussants: Fred Clapp, South Bend; Clay A. Ball, Muncie.
SURGERY OF THE GALL BLADDER AND DUCTS.....	H. A. Duemling, Fort Wayne
.....	Discussants: Hugo O. Pantzer, Indianapolis; J. C. Sexton, Rushville.
GALL BLADDER SURGERY.....	Simon J. Young, Gary
.....	Discussants: E. S. Jones, Hammond; G. G. Eckhart, Marion.
DISEASES AND INJURY TO THE HIP JOINT.....	G. D. Marshall, Kokomo
.....	Discussants: C. C. Terry, South Bend; M. S. Davis, Marion.
REPAIR OF UNCOMMON FRACTURE CASES.....	M. A. Austin, Anderson
.....	Discussants: J. E. Hiatt, Richmond; E. H. Clauser, Muncie.

THE SURGICAL ENGINEER, H. R. Allen, Indianapolis
Discussants: D. S. Wiggins, Newcastle.
M. E. Klingler, Garrett.

EYE, EAR, NOSE AND THROAT SECTION

Thursday P. M.

CHAIRMAN'S ADDRESS.....Carl H. McCaskey, Indianapolis
SYSTEM AND THOROUGHNESS IN EYE EXAMINATION
AND TREATMENT.....F. S. Cuthbert, Kokomo
Discussant: W. A. Hollis, Hartford City.
ENDONASAL OPERATIONS ON THE LACHRYMAL SAC..
.....Wm. B. Chamberlin, Cleveland
CYCLOPLEGICS IN DETERMINING REFRACTIVE ERRORS
.....Albert E. Bulson, Jr., Fort Wayne
Discussant: Thomas C. Hood, Indianapolis.

Friday A. M.

CATARACT EXTRACTION AND ITS COMPLICATIONS...
.....W. F. Hughes, Indianapolis
Discussant: Frank A. Morrison, Indianapolis.
PHASES OF CHRONIC PHARYNGEAL INFECTION.....
.....W. S. Tomlin, Indianapolis
.....D. S. Adams, Indianapolis
Discussant: K. S. Brown, Muncie.
EYE DRAINAGE.....G. W. Spohn, Elkhart
Discussant: C. N. Howard, Warsaw.

HAMILTON COUNTY

The Hamilton County Medical Society had an outing on Sunday, July 9, at Horseshoe Lodge, fifty doctors and their families being present. A chicken dinner was served at 5:30. The afternoon and evening were so thoroughly enjoyed, and proved such a success, that a similar meeting for next year was agreed upon.

W. F. BAKER, Secretary-Treasurer.

CORRESPONDENCE

STOLEN OR LOST NARCOTIC ORDER FORMS

Treasury Department, Internal Revenue Service,
Office of the Collector, Indianapolis, Indiana.
To All Persons Registered Under the Harrison
Narcotic Law:

The following ruling is for your information and guidance.

Effective immediately, Article 111½ is hereby added to Regulations 35, Revised November, 1919, as follows: Article 111½. STOLEN OR LOST ORDER FORMS. Whenever any used or unused order forms are stolen from, or lost (otherwise than in course of transmission) by any person registered under the Act, he shall immediately upon discovery of such theft or loss, report the same to the Commissioner of Internal Revenue, Washington, D. C., stating the serial number of each duplicate and original form stolen or lost. If the theft or loss includes any original orders received from other persons and the registrant is unable to state the serial numbers of such orders, the date of receipt thereof and the names and addresses of the purchasers thereunder should be stated. If the theft or loss is of or includes any entire books and the registrant is unable to state the serial numbers of the duplicate and original forms contained therein, the theft or loss shall in like manner be reported to the Collector of Internal Revenue from whom such books were purchased, instead of to the Commissioner of Internal Revenue, with a statement, in lieu of the numbers of the forms contained in such books, of the date or approximate date of purchase thereof; and the Collector immediately upon receipt of such report shall transmit the same to the office of the Commissioner with advice from his records (Form 679) of the serial numbers of the forms contained in such books.

M. BERT THURMAN,
Collector of Internal Revenue,
District of Indiana.

Approved:
D. H. Blair, Commissioner of Internal Revenue.
A. W. Mellon, Secretary of the Treasury.

TRUTH ABOUT MEDICINES

PROPAGANDA FOR REFORM

"MEDICAL" TESTIMONIALS FOR CHIROPRACTIC.—Chiropractors affect, with "patent medicine" fakers, a fine disdain for scientific medicine and the medical practitioner. How readily, however, do both seize with avidity any statement made by an individual who may be presumed to have the right to put "M. D." after his name—provided that statement seems favorable to the cause or may be so twisted as to make the public believe that a reputable physician has spoken a good word either for chiropractic or nostrum industry.

For some time there has been going the rounds a chiropractic advertisement purporting to quote "Opinions of Well Known Medical Men" on chiropractic. The material obviously emanates from one of the chiropractic "ad" factories. These make a business of supplying the individual chiropractor with advertising copy that he, because of educational deficiencies, would be unable to write for himself. According to these stock advertisements: ". . . there is an ever increasing number of M. D.'s all over the United States and Canada who understand, appreciate and practice straight chiropractic to the exclusion of medicine and every other method, as witness the following selected at random." Then follow what purport to be quotations from physicians. An examination of the records of the individuals who are quoted permits an appraisement of their testimonials. (*Jour. A. M. A.*, July 1, 1922, p. 57.)

DIGALEN.—Digalen was introduced with the claim that it was soluble amorphous digitoxin (a substance unknown to chemists) and with the claim that it possesses all the advantages and none of the disadvantages of digitoxin, such as cumulative effect and the production of nausea (claims which have been made for many proprietary digitalis preparations, but which always prove untenable). In 1909 the Council on Pharmacy and Chemistry admitted Digalen to New and Nonofficial Remedies after the manufacturer had discontinued the palpably unwarranted claims which had been made for the preparation. The Council did not determine whether Digalen contained "soluble amorphous digitoxin," but accepted it merely as a standardized and fairly stable digitalis preparation. Subsequently, the claim that it was a stable preparation was challenged. In view of the increased extravagance of the claims for Digalen, the Council in 1915 made a re-examination of this product and directed its omission from New and Nonofficial Remedies. There is no available evidence to indicate that Digalen has any advantage over tincture of digitalis or the infusion of digitalis for oral administration or that it is equal to ouabain or strophanthin for intramuscular or intravenous injection. With a better knowledge of proper dosage—for instance by Eggleston—an increasing number of practitioners find that, except in exceptional cases, the desired action of digitalis can be obtained by the administration of the official tincture of digitalis. (*Jour. A. M. A.*, July 1, 1922, p. 61.)

DESENSITIZATION TO RHUS.—Contrary to the theory of "desensitization" to rhus poisoning by internal administration of tincture of rhus, it appears that the susceptibility to rhus may be increased by successive intoxications. (*Jour. A. M. A.*, July 15, 1922, p. 220.)

MORE MISBRANDED nostrums.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act:

HOOKER'S COUGH AND CROUP SYRUP (C. B. Kingsley), containing oil of anise, oil of wintergreen, alcohol, sugar, water, bloodroot and a balsam, probably tolu.

"Just What a Ligature Should Be"

Armour's Catgut Ligatures, Plain and Chromic, boilable, strong, absolutely sterile, 60-inch, 000 to 4 inclusive.

Iodized Catgut Ligatures, non-boilable, strong, sterile and very supple, 60-inch, 00 to 4 inclusive.

\$30 per gross. Discounts on larger lots.

Also emergency lengths (20-in.) Plain and Chromic—\$18 gross

ELIXIR OF ENZYMES
—aid to digestion and vehicle for iodids, bromides, etc.
SUPRARENALIN SOLUTION
—astringent and hemostatic.



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Chicago

PITUITARY LIQUID
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obstetrical $\frac{1}{2}$ c. c.

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MADAM LEROY'S REGULATIVE PILLS (LeRoy Chemical Co.), containing aloes and traces of pennyroyal and tansy.

NAPTHOLENE (Dr. E. E. Sonnanstine), containing gasoline, kerosene and a small quantity of resin of red pepper.

HOMOSAN (International Toilet Co.), consisting of tablets containing a trace of strychin.

HASKIN'S COUGH MEDICINE (Haskin Medicine Co.), liquid carrying tar, chloroform, sugar and water.

MCMULLIN'S TONIC (Tilden McMullin Co.), containing alcohol, glycerin, iodids, phenol (carbolic acid) and water.

DUPREE'S FRENCH SPECIFIC PILLS (United Drug Exchange), containing aloes, iron sulphate and a trace of alkaloids, with indications of cottonroot bark and tansy.

APOLLO BRAND SEXUAL PILLS (S. Pfeiffer Mfg. Co.), containing extract of nux vomica and damiana and phosphorns.

GIEPSI VEMELA (Giepsi Vemela Co.), consisting of vegetable extractives, sugar and water.

MONTAUK STAR BRAND PILLS, containing iron sulphate, aloes and a trace of strychin.

PRINCESS BRAND PENNYROYAL, TANSY AND COTTON ROOT BARK COMPOUND PILLS, containing aloes.

SHORES LUNG BALM (Shores-Mueller Co.), containing pine tar, ammonium chlorid, a salicylate, chloroform, glycerin, sugar and water.

SHORES MOUNTAIN OIL LINIMENT (Shores-Mueller Co.), containing cajeput, wintergreen, sassafras, cedar oils, camphor, ammonia, borax, washing soda, plant extractives, capsicum oleoresin, alcohol and water.

SHORES SARSAPARILLA (Shores-Mueller Co.), containing extracts of plant drugs, including a laxative, a salicylate, a small amount of ammonium chlorid, a trace of alcohol, glycerin and water. (*Jour. A. M. A.*, July 15, 1922, p. 232.)

HAELEPRON TABLETS NOT ADMITTED TO N. N. R.—Haelepron Tablets are made by Bodenstein and Galinsky, Berlin, Germany, and sold in the United States by the Haelepron Sales Co., New York. The following, nonquantitative statement of the composition of Haelepron Tablets appears on the trade package: "Haemaglobin, Lecithin, Calc. Lact. Protein vegetab., Ferr. Sacch., Ferr. pyrophos." The Council on Pharmacy and Chemistry finds Haelepron Tablets inadmissible to New and Nonofficial Remedies because, (1) their composition is indefinite and semisecret; (2) the recommendations for their indiscriminate use are unwarranted; (3) the name is not descriptive of their composition, and (4) they are an irrational and useless combination which can have little, if any, effect on the conditions for which they are recommended. (*Jour. A. M. A.*, July 22, 1922, p. 319.)

PLATT'S CHLORIDES—An advertisement for Platt's Chlorides calls attention to the fact that chlorin antiseptics are at present in favor. The statement is then made that "chlorid of lime" is perhaps the best known of the older chlorid antiseptics. In the advertising it is stated, more or less directly, that Platt's Chlorides contain "chlorid of lime." Chlorid of lime is an unscientific name for chlorinated lime, official in the U. S. Pharmacopeia as Calx chlorinata. An analysis of Platt's Chlorides, made in the A. M. A. Chemical Laboratory several years ago, failed to show that the preparation contained any active chlorin derivatives upon which the virtues of chlorinated lime depends. Chlorides were present, but chlorides are not known to have any germicidal effect. A re-examination of Platt's Chlorides, made recently in the Association's Chemical Laboratory, again demonstrated the absence of active chlorin such as contained in chlorinated lime. (*Jour. A. M. A.*, July 22, 1922, p. 319.)

NEW AND NONOFFICIAL REMEDIES

ANTI-ANTHRAX SERUM—P. D. and Co.—An anti-anthrax serum (see New and Nonofficial Remedies, 1922, p. 284), marketed in syringes containing 50 Cc. Parke, Davis and Co., Detroit.

ANTIMENINGOCOCCUS SERUM—P. D. and Co.—An antimeningococcus serum (see New and Nonofficial Remedies, 1922, p. 286), marketed in packages of two syringes, each containing 15 Cc.; also in packages of one syringe containing 50 Cc. Parke, Davis and Co., Detroit.

DIPHTHERIA TOXIN-ANTITOXIN MIXTURE—P. D. and Co.—A diphtheria antitoxin-toxin mixture (see New and Nonofficial Remedies, 1922, p. 282). Each cubic centimeter represents a single human dose. It is marketed in packages of three bulbs representing one immunizing treatment; also in vials containing 20 Cc. Parke, Davis and Co., Detroit.

TUBERCULIN B. F. (Bovine)—P. D. and Co.—A preparation of tuberculin Denys (see New and Nonofficial Remedies, 1922, p. 296). It is made in the same manner as tuberculin Denys (Human), except that the bovine type of tubercle bacillus is used. It is marketed in packages of six 1 cubic centimeter sealed glass tubes. Parke, Davis and Co., Detroit.

BORCHERDT'S MALT COD LIVER OIL AND PHOSPHORUS.—Each 100 Cc. contains phosphorus, 0.009 Gm.; cod liver oil, 25 Cc., and Malt Extract (Plain). (see New and Nonofficial Remedies, 1922, p. 176), 75 Cc. Borcherd Malt Extract Co., Chicago. (*Jour. A. M. A.*, July 8, 1922, p. 135.)

YEAST PREPARATIONS.—The Council on Pharmacy and Chemistry has adopted a general discussion of yeast preparations for inclusion in New and Nonofficial Remedies. In this article it is stated:

The use of yeast as a bactericide in external infections has been practically abandoned. Yeast and preparations derived therefrom have been widely extolled of late as sources of vitamin B whenever there may be indications for its therapeutic use. However, these indications are so indefinite and the opportunities of obtaining vitamin B through the customary foods are so abundant that the demand for yeast vitamin seems to be limited. The therapeutic aspects of the vitamin problem are still in the experimental stage. Yeast has a laxative action, but the cause of this action is not known. Yeast has been recommended for internal administration because of its supposed beneficial effects upon furuncles, acne, etc. Many clinicians doubt this effect, which may, after all, be expected from any anticonstipation agent. It is not clear to what extent, if at all, live cultures of yeast may be used to change the intestinal flora in cases where such a change is desirable. (*Jour. A. M. A.*, July 8, 1922, p. 135.)

EPINEPHRINE—G. W. C. Co.—A brand of epinephrine—N. R. It is marketed in vials containing epinephrine—G. W. C. Co. (base), 1 grain, and in the form of Epinephrine Chloride Solution—G. W. C. Co., which contains epinephrine hydrochloride equivalent to 1 part of epinephrine in 1,000 parts of physiological solution of sodium chloride. G. W. Carnrick Co., New York.

PITUITARY EXTRACT-LEDERLE (*Obstetrical*).—An extract of the posterior lobe of the pituitary body of cattle, approximately two and one-half times the strength of solution of hypophysis, U. S. P., preserved by the addition of chlorbutanol. For actions and uses, see New and Nonofficial Remedies, 1922, p. 213, under Pituitary Gland. Pituitary Extract-Lederle (*Obstetrical*) is marketed in 0.5 cubic centimeter and 1 cubic centimeter ampules. Lederle Antitoxin Laboratories, New York.

PITUITARY EXTRACT-LEDERLE (*Surgical*).—An extract of the posterior lobe of the pituitary body of

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COMMERCIAL ANNOUNCEMENTS, ETC.

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THE JOURNAL OF THE Indiana State Medical Association

Owned, Published and Controlled by the Indiana State Medical Association

ISSUED MONTHLY under the Direction of the Council

VOLUME XV
NUMBER 9

FORT WAYNE, IND., SEPTEMBER 15, 1922

Per Year, \$3.00
Single Copy, 30 Cents

CONTENTS

	Page
ORIGINAL ARTICLES	
The Correction of Club Feet. H. R. Allen, Indianapolis	289
Septic Infection Following Abortion or Delivery. A. S. Jaeger, Indianapolis	293
Non-Tuberculous Infections of the Kidney. P. E. McCown, Indianapolis	298
Report of Appendicitis Cases. James Y. Welborn, Evansville	303
A New Histology of Red Blood Corpuscles and Staining Technic. E. L. Dewey, Whiting	305
THE MUNCIE SESSION	
The City of Muncie	312
General Announcement	319
Condensed Program	321
Official Program	321
Scientific Program	322
Report of the Secretary	326
Report of Committee on Administration and Medical Defense, Including Report of Treasurer	326
Report of Committee on Medical Education	327
Report of Committee on Hospital Standardization	327
Abstract of Report of Committee on Automobile Insurance	327
Report of Committee on Scientific Work	328
Report of Committee on Arrangements	328
Report of Committee on Public Policy and Legislation	328

(Continued on Page xiii.)

Next Annual Session, Muncie, September 27, 28, 29, 1922. List of Officers and Committees on Adv. Page 2. Entered as Second Class Matter, January 20, 1908, at the Postoffice at Fort Wayne, Indiana, under Act of Congress of March 3, 1879. Accepted for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized October 18, 1918.

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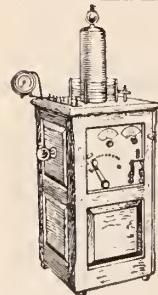
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ISSUED MONTHLY under Direction of the Council

ALBERT E. BULSON, Jr., B.S., M.D., Editor and Manager

OFFICE OF PUBLICATION: 406 West Berry Street, FORT WAYNE, INDIANA

VOLUME XV

SEPTEMBER 15, 1922

NUMBER 9

ORIGINAL ARTICLES

THE CORRECTION OF CLUB FEET* H. R. ALLEN, M.D. INDIANAPOLIS

"The Treatment of Club Feet" was the title assigned for my paper. I think these feet have been treated entirely too much, so I have substituted the word "Correction" in place of "Treatment" as it is more appropriate to the method I shall describe. In the least number of words I desire to present a few facts concerning this system of transforming club feet into perfectly normal feet.

There is nothing mysterious about this standardized deformity nor about any one of the four distinct foot deformities that compose it. In over twenty-five years this system has not failed and out of the hundreds of doctors who have referred patients to me for this system of treatment, there is not one who can point to a single case that ever had to return for reoperation. The cases treated range in age from six hours to over sixty years old. I do not believe in "recurrent club feet" nor in recurrent surgery. I do not believe in substituting one permanent deformity for another.

I do believe that any case of this deformity can be absolutely corrected in form and function, with normal range of motion. The treatment must be completed in less than one year, no matter how old the patient is. In younger cases the time limit, of course, is greatly reduced, and the process is simplified. Furthermore, several of the complications¹ frequently associated with this standardized deformity are automatically and simultaneously corrected.

In the correction of standardized club feet there is absolutely no excuse for cutting or breaking or even touching a bone. However, it is very essential to rearrange their abnormal deformed positions. This can be done by releasing the grip of the short, soft, deformed

tissues that hold the bones in a false position. I have stated only a few of many important and commendable facts pertaining to this system, which is as painless as any other system could be and its results gain favor by comparison with any system of treatment.

The development of this system began long ago. It is founded upon the principle of combining the best methods of permanently correcting each one of the four individual and distinct foot deformities into one straightforward, logical and surgical procedure. In order to perfect this system it was found necessary to construct certain precision tools, and also to design dependable devices that would maintain with accuracy each degree of overcorrection during post-operative treatment.

The best and most skillful operation may become a partial or complete loss if the benefits gained surgically cannot be maintained mechanically.

The standardized club foot, shown in Fig. 1, is a compound deformity composed of adduction, cavus, varus and equinus. Associated de-

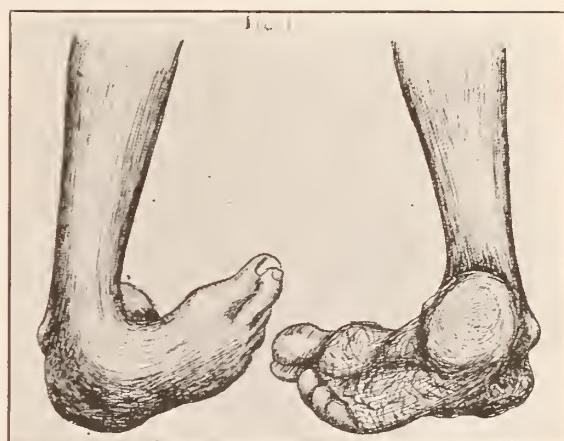


Fig. 1. Dorsal and plantar view of standardized club foot showing proximity of heel and toe due to the combination of adductus and cavus. Think how remote they are in a flat, valgus foot. Walking is done on the top of the foot instead of on the much wrinkled, unused sole. The heel is higher than the malleoli. The toes are hooked up by adduction. Evidently equinus refers to the tarsus primarily and to the anterior foot secondarily.

*Read before the General Meeting of the Indiana State Medical Association, Indianapolis Session, September, 1921.

(1) In a previous article, "Facts Concerning Club Feet," this deformity is standardized and several of the frequently associated deformities are referred to as complications, so further mention of them here is unessential as we are discussing merely the correction of "Standardized Club Feet."

formities, regardless of their frequency or infrequency, are merely complications, since they do not occur constantly in all club feet. In

working out this system of treatment, the permanent correction of adduction was first developed, then each of the succeeding separate and distinct foot deformities was taken up in the order mentioned above. As development progressed it was found possible and practical to convert the deformities of adduction and cavus simultaneously into abduction and planus by using one reduction tool. The deformities of varus and equinus are individually converted into valgus and calcis positions by one other precision tool, but the position of the tool must be turned 90 degrees. The four component deformities are converted into their opposite deformities by using two reduction tools.

The next item of great importance was to develop a single retention tool that would hold with exact precision every desired degree of overcorrection until the foot was sound and well. With these precision tools and with strict attention to the details of this system, any surgeon skilled in mechanical affairs ought to secure perfect results every time. The whole topic of treating club feet involves good or bad

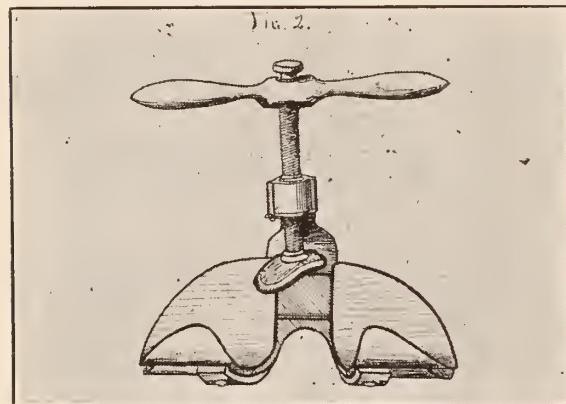


Fig. 2. The adducto-cavus corrector is adjustable for all sizes of feet, whether right or left. When its double sliding tracks are lubricated, friction becomes practically negligible. After designing a variety of these instruments with roller and ball bearings and pivoted rather than track movements experience has recommended this type.

mechanics. If patients, treated by any system, return for subsequent operations there is something radically wrong with the system, with the tools, with the operator, or with all three.

The tools used in the correction I am now to describe are named according to the duty each performs. For example, the adducto-cavus tool (Fig. 2) is used to transform the deformities of adduction and cavus into abduction and planus. The foot is placed in the tool as shown in Fig. 3. Then the screw pressure is applied at an angle of 45 degrees, which approximately represents the resultant of resistance offered by the combination of adduction in a horizontal plane and cavus in a vertical plane of flexion. When the pressure is applied for ten seconds, and never longer, the heel and toe instantly move away from each other.

In order to avoid unnecessary pressure under the tarsal pad (Fig. 3 A) a double sliding track for heel and toe plates (Fig. 3 A & B) are provided to reduce friction. This tool never crushes bones. It merely lengthens the short, deformed, soft tissues as they present themselves in offering resistance to correction. Previous to using this tool, however, the flexor brevis digitorum and other gross tissues remote from bones are divided by the tenotome through a skin puncture $\frac{1}{8}$ of an inch long.

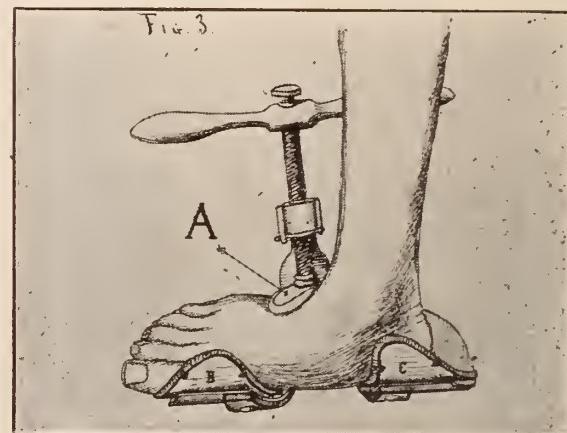


Fig. 3. The foot is shown converted into a position of abduction-planus. The pressure of pad "A" has produced a separation of "B" from "C". Note that the pads on "B" and "C" are sewed fast to the sliding platforms.

The remaining two deformities are corrected separately by the varo-equinus instrument shown in Fig. 4 A. In correcting the varus deformity the long axis of the foot is placed at right angles to the long lever as shown in Fig. 4 B. In using this instrument for any purpose the strap must always be used below

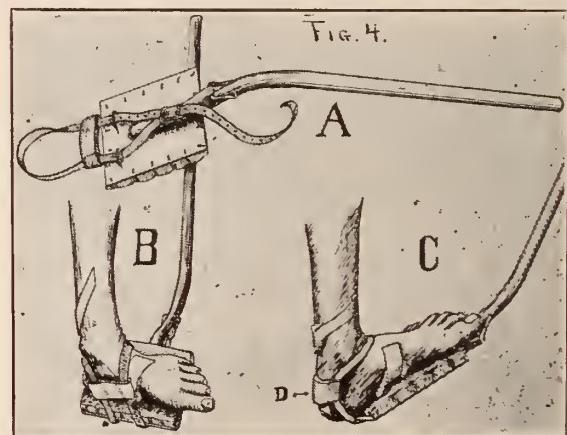


Fig. 4. The long lever arm is bent up for the simple reason that a wagon pulled by its tongue will go straighter than it will if pushed from behind. As a general rule it is better to lead than to push. This tool with its pad securely sewed in place gives complete control of position between foot and leg provided the strap is kept below the malleoli. It is therefore useful in breaking up adhesions and reducing dislocated ankles and correcting rigid flat feet and the like. It works equally on right or left feet of almost any size.

the ankle bones. The lever arm is so long² that the power to be employed is minutely and safely gradated. The little finger is strong enough to convert any varus deformity into an extreme valgus position.

The varo-equinus instrument is now turned 90 degrees so that the long lever lies parallel with the long axis of the foot as shown in Fig. 4 C. The transverse heel pad (D) is placed across the heel and the lever is brought up on a trial trip to see that all anterior foot flexion has been overcome (Fig. 4 C). Then the Achilles³ tendon is cut in the usual oblique manner and then the lever is brought up until the equinus deformity is transposed into an extreme position of calcis.

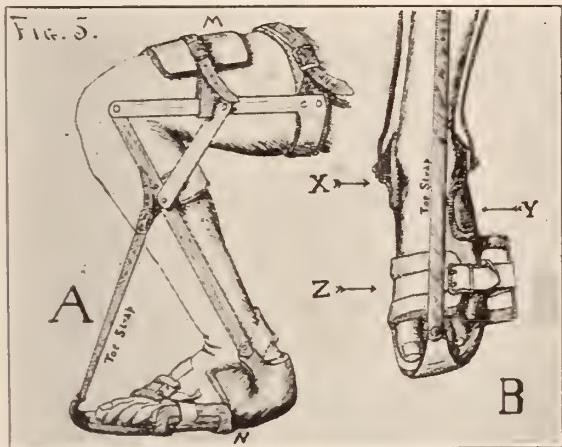


Fig. 5. The knee joint is locked with foot and femur parallel, producing a popliteal angle less than a right angle. Pads 'M & N' represent an orthopedic vice for the thigh, leg and foot although the ankle joint may move. One look is sufficient evidence that the foot cannot turn in while the brace is on. Furthermore any normal degree of eversion is self evidently a simple matter of twisting the lower ends of the leg bars outward, or you may set the ankle joint rivet farther back on the outside than on the inside. To remove the brace only four straps are to be unhooked. The straight edge outer rigger on the little toe side projects far enough to control any degree of abduction.

The surgical correction is now completed provided the little finger can easily lead the foot into the extreme limits of normal range of motion in each of the opposite deformities, because success or failure abide in the zone of the tarsus.

Assuming that the surgical correction is now complete, we should study most carefully and critically both the construction and the rules for wearing the adult retention brace shown in Fig. 5 A. This brace, a simple device, devoid of

- (2) Short levers are considered very dangerous because tissues not intended to be elongated may be instantly and unintentionally torn and damaged after the resisting tissues let go under the strained muscles of the operator.
- (3) In adult cases the flexor brevis and the Achilles tendon are cut. Sometimes the anterior tibial is cut but I have never found it necessary to do any other cutting. If each puncture area is sterilized, and covered with gauze held in place by a strip of spirally applied adhesive plaster, one end of it can be pulled up when the tenotome is used and instantly put back. This prevents contamination during manipulation. It saves time and frequently the loss of one drop of blood, aside from betraying that commendable quality of forethought.

all superfluous parts, fulfilling its exact purposes, is designed on the ancient plan of keeping the foot and femur parallel⁴ and at the same time holding the leg and thigh so that they make an angle, less than a right angle, with its apex in the popliteal zone. No man can hope for perfect and uniform results by using any other known position. This one brace gives absolute and precise control over each position gained during the surgical correction and maintains that gain until the foot is permanently cured. The padded foot plate (Fig. 5 A & B) is provided with vertical plates for the inside of the heel and for the outside of the tarsus. The inelastic webbing strap pulling across the pad on the anterior part of the foot acts like the power arm of a lever and controls any desired amount of abduction by its outward fixation. The arrows (X, Y & Z) in Fig. 5 B indicate the direction of lever energy. The control over the corrected cavus and equinus is regulated by the toe strap. The desired amount of overcorrected varus is maintained by having the padded foot plate hinged higher on the external than on the internal side. The pad that rests on top of the thigh, indicated by the letter M, prevents the knee from rising when the toe strap is tightened. Pads M and N represent a fixation vice for securing the foot, leg and thigh. The bars along the thigh and leg making in-toeing impossible, and assure any normal amount of out-toeing by merely twisting the lower parts of the leg bars outward.

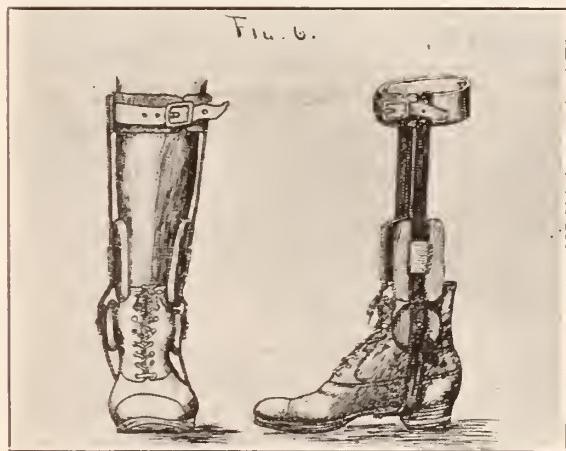


Fig. 6. Front and side view of left walking brace with sole and heel thicker on external side. This is a two bar brace with both internal and external ankle and low leg pads. Ordinarily either type of pad is sufficient, provided a firm bearing against the external side is secured. In order to make a one bar brace you cut off the vertical, internal stirrup close to the sole and detach the leg bar from the internal end of the leg band. Then slip the leg band around 90 degrees and secure it to the top of the external leg bar. Patients who have walked all their lives on the tops of their feet appreciate the sense of security afforded by the double barred brace with firm bearing pads on both sides of their ankles when they walk for the first time in their lives on the soles of their feet.

⁴) More than 50 years ago, my father was the first surgeon to use a brace that held the foot and femur parallel while correcting a club foot. More than 25 years ago I demonstrated the advantages of the acute popliteal angle.

Except for removing the brace once or twice a day for massage or bath or inspection under bearing areas, this brace is worn constantly until the foot shows no tendency to return to any one of its original foot deformities, after being entirely free from all restraint for several hours. It is then worn only at night and the walking brace is worn during the day.

Front and side views of the walking brace are shown in Fig. 6. It may be made of one, or preferably two, vertical bars hinged at the ankle to the stirrup that is riveted to the sole of the shoe just in front of the heel. The sole and heel are thicker externally than internally. This brace should be worn for several months to encourage a normal range of valgus motion and to provide ample time for cartilaginous and osseous development where needed in the tarsal zone.

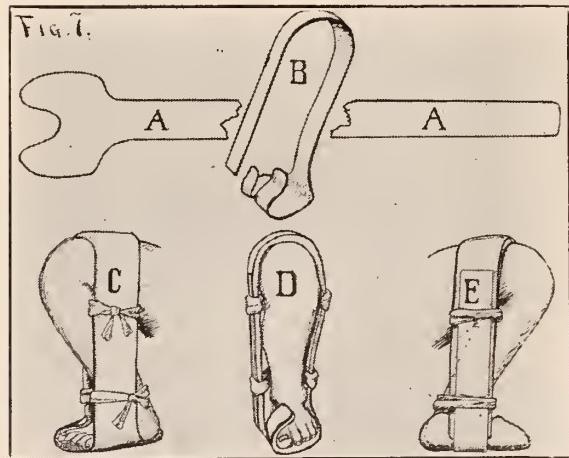


Fig. 7. "AA" represents the galvanized pattern for the infant retention brace before being bent into proper shape. "B" represents it bent into shape before being padded inside and out with woolen blanket cloth. The location of the bend over knee determines the length. Gauze bandages behind the popliteal space hold the knee forward, while one behind the heel prevents posterior displacement. A piece of adhesive plaster runs all the way around the brace and secures the size of the brace after it has been determined. Any degree of correction is easily established by bending the brace where bending is indicated. In this brace as in the adult brace the foot and femur parallel design takes care of any degree of in toeing or out toeing. Notice too that the bandages are not constrictors. They do not surround the leg. They merely go behind it and behind the heel.

Fig. 7 shows the infant retention brace. This is the simplest and most fool-proof of all surgical appliances that lay any claim to absolute efficiency. It is sanitary and it is easy to remove and to replace. It is adjustable for size and growth, and for absolute control over each item of overcorrection. It is made of a single piece of flexible, galvanized, non-rusting steel as shown in Fig. 7 A A & B. It is padded and worn in comfort. Also it is built on the foot and femur parallel plan with an acute popliteal angle. Since infants do not walk there is no need for discussing their walking braces. They seldom require any operation other than manipulation, but if the tarsus does not yield completely by manipulation then see to it that it

yields by the other methods and stand firm for the permanent and perfect correction of every detail.

DISCUSSION

DR. G. D. MARSHALL (Kokomo): Dr. Allen's paper of course deals with the mechanical treatment of club feet, and I am perfectly in accord with that opinion. I think that is the method of choice in dealing with this condition. In the pathological anatomy of club feet we have certain things to deal with. One of them is the fact that the deltoid ligament holds the foot in the position of varus. It has been found by dissection that if all the other ligaments were removed and the deltoid remained, the deformity would persist. Reasoning from that standpoint there have been various operations advised.

In the treatment of this condition age has considerable to do with the result, and indicates the method of treatment. I am not quite so sanguine as Dr. Allen about the age of these patients. If you are going to reform a foot, treatment must be early, but operation cannot be done before the child is two years old, as before that age the bones are not sufficiently formed to permit of the dissection of the periosteum from the bone, with insertion of ligaments.

The doctor is to be congratulated on the non-recurrence of club feet. Almost all men admit that they do have recurrence of the clubbing. That is probably because it has not been properly corrected in the first place, or the treatment has not been pursued for a long enough time. I think the time element has a great deal to do with it. I do not think you can accomplish rapid cure of club feet, because it takes a certain amount of time for the bones to mold to the proper shape and position.

In making an x-ray of club feet, or any other x-ray on a child of that age, you see only the centers of ossification of the bones. You have very little bony structure to deal with, and it seems to me that it is entirely futile to do a bone operation at that time. I think if these cases are gotten at once and given the proper attention for correction, and properly retained, you get a very good result. I think the best functioning feet I have seen were the result of being held in position by adhesive strapping and mechanical apparatus.

DR. OSCAR T. SCAMAHORN (Pittsboro): I have a son who was born with club feet. He was born about one o'clock in the morning, and about ten o'clock that same morning I had him up to Dr. Allen and he put him in a brace. He took a piece of silver wire and molded it after the fashion of this large brace, and with adhesive strapped the foot into the position he wanted. About every two weeks this boy had his brace changed. He wore this brace about five months, and he began to walk at thirteen months. He is as active as any boy.

DR. H. R. ALLEN (closing): One point I want you to bear in mind is that I never touch the bones in correcting a club foot regardless of age or other conditions. You do not have to touch the bone to correct club feet. If you want your patient to be comfortable after the operation, overdo the correction while you are operating. What you gain during the operation you will maintain mechanically afterwards, but what is not gained and not maintained the patient will not get during his lifetime. So do your work thoroughly, put the foot in the position in which it belongs, and hold it there with the retention brace.

SEPTIC INFECTION FOLLOWING ABORTION OR DELIVERY*

A. S. JAEGER, M.D., F.A.C.S.

INDIANAPOLIS

These notes being in no sense a paper or treatise on the subject, I shall at once present for your criticism my method of treating septic infection following abortion or term delivery.

Successful treatment depends upon a careful study and correlation of certain diagnostic points, as follows: (1) Past history, especially as to previous pelvic disease, gonorrhea, lues, malaria, typhoid, etc. (2) Is the present infection an acute flare-up of a chronic condition, or an acute primary infection? (3) Patient's condition during pregnancy.

STATUS PRAESENS—(1) Focal infections, (2) possible causative factors, (3) time of appearance and type of symptoms, (4) pulse and temperature. Rectal temperature only is reliable. One not infrequently sees a variance of from two to four degrees between mouth and rectal readings. Special attention should be paid to the relationship between pulse rate and temperature curve. A high temperature unassociated with an appreciable increased pulse rate is not in my experience as of serious import as a rapid, bounding pulse, regardless of temperature. (5) Abdominal distention, tenderness, pain, localized or ascending peritonitis. (6) General systemic reaction. Blood pressure curve, urinalysis, etc.

LOCAL EXAMINATIONS—1. Character of vaginal discharge. An absence of, or scanty, discharge may lull us into a false sense of security. 2. Is cervical os patulous or contracted? Degree of drainage therefrom. 3. Is uterine body involuted or not? 4. Is the uterus empty or not? 5. Has the infection passed the confines of this organ and involved the pelvic lymphatics, adnexa or cellular tissues?

LABORATORY FINDINGS—1. Blood cell count, coagulation time, etc. 2. Blood culture and smears. 3. Smears and culture of local discharges.

Pardon me if I appear too emphatic in again reiterating that a careful correlation of the foregoing points frequently makes for the difference between successful and unsuccessful treatment. For example, undervaluation of the patient's constitutional reaction has led to the performance of certain seemingly indicated local measures which had better have been left undone.

If examination leads to the conclusion that the infection has passed the bounds of the uterus, and pelvic structures are involved, there is more or less progressing peritonitis and undoubtedly constitutional involvement, *i. e.*, bacteremia, septicemia or pyemia—I feel that any local major operation is of little avail. At most (?) a careful removal of free material from the uterus may be permitted, and if indicated some method used to promote free drainage, but hysterectomy or any other intra-abdominal interference is unwarranted, for the patient is now suffering from a disseminated systemic poisoning, the infection having passed far beyond the confines of its initial implantation site, and any involved operative manipulation tends to hasten rather than to retard a fatal outcome. Of course if there is free pus in the pelvis, colpotomy should be done and drainage established. However, in general, our best hope for such cases is in proper constitutional measures, as outlined further on.

LOCAL MEASURES—If local interference is indicated, the following is my usual course, modified to meet individual indications: The patient is sent to the hospital if not already there. These cases cannot as a rule be handled satisfactorily otherwise. No other alimentary cleansing besides colon flushing is ordered. Blood, for count and culture, and specimens of genital discharges are taken for smear and culture, and urine is sent to laboratory. The following proctoclysis: Sodii salisylas gr. xxx-xl; sodii bicarb. and glucose of each ounces i-ii; normal salt sol. ounces xxiv-xxx, is at once begun and continued until patient is removed to surgery. Patient is prepared in usual way for vaginal operation. For some years I have discarded the pre-anesthetic administration of morphine and have given in its stead chloretoe gr. x-xv per mouth. The anesthetic of choice, if any is given, is nitrous oxide and oxygen. The cervical canal is carefully dilated and a uterine sound introduced for purpose of demonstrating the length and relative direction of the cavity. It has been my fortune to have seen, as have doubtlessly most of you, a number of perforated uteri, due to failure of the operator to assure himself as to this before recklessly gouging, scraping or pulling on tissue. A tonsil sponge forceps, or similarly blunt instrument, is used to remove all free material. No effort is made to remove adherent masses, nor is the uterine curette ever

*Presented before Section on Surgery of the Indiana State Medical Association, Indianapolis Session, September, 1921.

introduced. A uterine applicator forceps covered with gauze or tape, and saturated with 50 percent tr. iodine in alcohol solution, is used to gently but thoroughly swab the entire uterine cavity. If the case is of the mild type, and I feel reasonably certain that the uterus is empty, nothing further is done. The patient is given 1 cc. obstetric pituitrin or some form of ergot hypodermatically, and returned to bed. If the type is moderately severe, or there is probability of unremoved free or adherent material, the cavity is packed with gauze saturated with 50 percent tr. iodine in alcohol solution, to be removed in 24 hours. I have yet to find this fail to take care of any retained material, it usually being expelled 24 to 36 hours after removal of the packing, without any untoward symptoms in the meantime. If the condition is more severe, and there is found a fetid or purulent discharge, necrotic secundes or phlegmons, a fenestrated soft rubber tube is introduced well into the uterine cavity, and sutured to the labium. The tube should protrude sufficiently from the ostium vagina to permit attachment of irrigating tip without removal of vaginal pad, through an opening in which the tube has been carried.

POST-OPERATIVE TREATMENT:—The patient is placed in bed with the head-end sufficiently elevated to aid uterine drainage. As soon as considered safe, she is placed in the modified Fowler position. I believe this is superior to the prone position, favoring as it does free drainage, and preventing the possible reabsorption of toxic material from accumulated discharges. Proctoclysis is immediately begun as per before mentioned formula. If the bowel is intolerant, hypodermoclysis of soda and normal salt solution, or normal salt solution intravenously, is given. I think this is of inestimable therapeutic value for it replaces lost body fluid; to some extent at least, allays thirst; dilutes toxins; neutralizes acidosis; reduces or frequently abolishes post-anesthetic discomfort; and acts as a food. If the general picture of the case leads to the belief that the infection is of the streptococcus type, I do not wait for smear or culture reports, but immediately give 50 cc. polyvalent antistreptococcus serum intravenously by preference, and repeat as indicated in 12 to 18 hours. If this serum is not obtainable like quantities of normal horse serum are given. I might say that I have seen some very pleasing results, not only in cases of this type but in non-puerperal acute pelvic inflammations, especially where the gonococcus seemed to be the determining factor, follow the use of normal horse serum. Whether or not the effect of serum injection depends upon the specificity of the serum used, or upon a general cell protein-splitting ability, thus promoting anti-body formation, I do not presume

to say, but my own experience seems to bear out the latter hypothesis. On occasion when serums were not obtainable, I have resorted to the intravenous injection of 30 grains of chemically pure sodium iodide in 20 to 30 cc. dilutions, repeated at appropriate intervals, with seemingly satisfactory but slower results.

In my humble opinion the very best of all intravenous procedure is blood transfusion. Two hundred to 300 cc. of the patient's blood is withdrawn, if her general condition does not too strongly contraindicate, and replaced by an average of about 700 cc. of donor's blood. I believe the withdrawal of some of the patient's toxic blood is for obvious reasons good practice.

Ice-bags are applied to the lower abdomen, or hot bags when cold is not well borne, and while either one may allay pain by reflex action, I am frank to state that it is to me an unsolved problem, whether the application of either heat or cold to the external abdominal surface exerts any specific influence upon the actual pathology of an intra-abdominal condition. I have made some experiments by applying water-bags at ordinary body temperature, sand-bags or shot-bags of like weight, and have about come to the conclusion that the good effects are the result of the bags acting as splints, and the retention of their position *in situ* enforcing body repose, rather than to an ability to cause any rapid change of volume or temperature from the superficial abdominal parietal to the deep visceral or pelvic circulation; or to any direct action upon the visceral structures involved, which in view of anatomical relationships seems doubtful.

If a retention tube has been introduced, the nurse is instructed to irrigate at 3 to 4 hourly intervals, one pint of equal parts of alcohol and sterile water (if alcohol is obtainable), or next best one to two drachms of tr. iodine to the pint of water. Hypertonic salt solution has also proven of much value. These three agents however have given me more satisfaction than any other solution tried.

Ergot in some form and appropriate dosage up to 60 minims by mouth is given three to four times daily for some days, as I feel the resultant uterine contractions aid in the expulsion of retained material or formed exudates and the closure of sinuses tends to prevent continued introduction of septic material into the circulation.

For pelvic or diffuse peritonitis, the remedy par excellence in my hands is opium, in the form of rectal suppositories, used as high as half grain doses at three to four hourly intervals; and knowing that I lay myself open to much adverse criticism I nevertheless maintain that opium for peritonitis and acute pelvic inflammation is well-nigh as specific as quinine for malaria. The argument that it does harm

by drying up secretions, etc., does not hold good, especially not when copious procto- or hypodermoclysis is used.

Other appropriate constitutional therapeusis is used according to the individual case, although I find that natural salicylate of soda in gr. xv doses from one to three hourly intervals combined with bicarbonate of soda, or the following combination: Hydrarg. chlor. corros. gr. 1/48—1/30, Fowler's sol. min. iii, tr. ferri chlor. min. iii-v, tr. nux vomic. min. v-x, given about four times daily, meets the usual requirements.

I have not missed the internal administration of alcohol, and feel its value has been greatly overestimated. However this does not mean that I would not use it, for it has its value, though no more so than other stimulants which can be used.

Time prevents me from entering into a more detailed explanation of each step of the method I follow, feeling that the reason therefor and the result expected are self-evident. Also, it must always be remembered that individualism is the keynote of successful treatment in every case, therefore the above outline must be adapted to meet specific indications.

A differential diagnosis is occasionally as difficult as it is important, *i. e.*, I have known of cases in which needless curettage, etc., and in one instance hysterectomy was done, where further careful study of the cases showed lues, malaria, typhoid, acute tonsillitis, etc. My method of treating these infections may, as a whole or in part, meet with the decided disapproval of many of my friends whose opinion and judgment I value highly; but in view of the fact that no claim as to originality is made, I may state without fear of being misunderstood that, after following it for some fifteen years or more, it has proven most valuable to me.

In conclusion may I submit two recent cases which concisely demonstrate the above outlined method of treatment:

Case I:—Mrs. F. C., native of Spain, 36 years old, married 18 years. First seen by me in consultation with Dr. L. Witt, March 15, 1921. Past history: Negative as to the usual diseases of childhood. Gives history of having had malaria in years past. Mother of seven children. No previous troubles in confinements. Three children died at various periods after birth. Three months before the birth of her last child, which occurred March 9, 1921, she complained of soreness in the region of gall-bladder. Patient began labor at 2 or 3 a. m., March 9th. Membranes ruptured spontaneously about 6 or 7 a. m. Her physician states she had a dry labor, and was delivered without forceps about midnight of March 9th. No laceration. Placenta expressed about 20 minutes later intact. Patient seemed normal until 11 p. m. March

10th, when she had a chill, and developed a pain in the upper left side. On the morning of March 11th her temperature was 101 per mouth, pulse 90. She had a very severe pain in region of gall-bladder, in mammary line on level of ninth rib, and under right scapula. By afternoon of March 11th pain subsided, but temperature continued 101 in morning and 102 at night with pulse of 90 to 100, until the morning of March 15th, when she had another chill.

She was first seen by me about 11 a. m. of this day. Facial expression worried; skin pallid and leaky; tongue coated; breath fetid; temperature 100.2 per mouth, 104 per rectum; pulse 100 bounding; blood pressure, systolic 160, diastolic 90. Nose, throat and teeth, seemingly normal. Lungs and heart negative. Liver and gall-bladder seemingly negative. Abdomen slightly distended. Pain and tenderness negative above umbilical line, quite tender in pelvic region. Vaginal examination: Very scant, yellowish discharge, some odor. Perineal scar from previous third degree laceration. No recent tear. Cystocele and rectocele. Cervix shows evidence of old bilateral laceration. Cervical os contracted. Uterine body boggy, subinvoluted and tender. Adnexa and pelvic cellular tissue congested and tender.

Patient was removed to the Methodist Hospital, reaching there about 3 p. m., at which time her rectal temperature was 107, pulse 140. She was prepared for the surgery and operated at 5 p. m. in the usual manner. The uterine cavity measured six inches. Only a few shreds of secundes were found, but a number of masses of necrotic uterine tissue, some as large as one inch in diameter were removed. The cavity was swabbed with 50 percent tr. iodine in alcohol solution. A fenestrated rubber tube was introduced and attached by suture to the labium. The patient was returned to her bed, and the usual post-operative continuous proctoclysis, with the addition of 60 gr. salicylate of soda was at once begun. Fifty cc. anti-streptococcus serum were given intravenously, and repeated the next morning, March 16th, at 9 a. m.

The temperature curve is interesting. On March 15, 6 p. m., after return from surgery, the rectal temperature was 108, and then gradually receded until by 3 p. m. March 18, it was 99 rectal. It remained so until 6 p. m. of March 20, when without any warning her general condition having been very good, she had a chill and the temperature rose to 106 rectal. In view of the fact that she had a past history of malaria, previous medication was stopped, and quinine given, after blood had been taken for examination. This and a number of other examinations for plasmodia were unsatisfactory, although it was thought by one examiner that there were some bodies noted which might be

plasmodia. By March 21st the temperature was again normal and remained so until March 28, on which afternoon it again shot up to 102 4/5 and ran a variable course, never over this, until April 4, when it became normal and remained so.

The laboratory findings in this case were disappointing. I owe much thanks to Dr. Warvel for his painstaking efforts, but repeated blood and local discharge cultures and smears were negative. The white cell count also was interesting. When the patient entered the hospital the white cell count was only about 6,000, and at no time, in spite of the rather stormy clinical picture, was there a count above 18,000.

The post-operative treatment was as outlined in the above notes. At this writing I am informed that the patient is apparently well.

Case II.—Mrs. M. S., aged 22 years, American. Married 4 years. First seen in consultation with Dr. Geo. Bowman, June 18, 1921. Past history: Usual diseases of childhood. No after effects. Also has had diphtheria and attacks of acute tonsillitis. None recently. Menstruation began at 14 years. Always irregular but not painful. Married at age of 18 years. Mother of two living children; the youngest 16 months old, still nursing at breast. Had one miscarriage between first and second term delivery. About June 8, 1921, the nursing child, while at the breast, bit her about an inch to the left of the right nipple. The area has been painful since. History of present illness: On the morning of June 15, 1921, without any known reason she aborted, passing as was thought all the products of conception. The family think the pregnancy was about 3 months, but are not certain as she had not menstruated since birth of last child. Being inclined towards the Christian Science persuasion, no physician was called. She continued to bleed without intermission, when on June 18, 1921, about 10 a. m., she had a prolonged chill and "sinking spell". About 4 or 5 p. m. her condition became such that Dr. Geo. Bowman was called. He saw her at about 5:30 p. m. At this time there seemed to be no active bleeding from the vagina, and as he does not handle obstetric cases, he simply applied restoratives, made no digital examination, and invited me to see the case.

I saw the case with Dr. Bowman about 7 p. m. June 18, 1921. Status *praesens*: The patient is a well nourished young woman. Her face is pallid; lips lemon color; pulse 120, irregular; temp. 101, rectal; skin cold and leaky; she is restless, seemingly irrational, and at times semi-comatose. She has the appearance of shock. General physical examination: Heart and lungs negative. Systolic blood pressure, 140, diastolic 90. A red area about one-quarter inch in diameter is noticed on the right breast about an inch to the left of nipple. The patient seems to react when this area is pressed, but

there is no palpable tumefaction. The abdomen is slightly distended and somewhat tympanic, but seemingly not painful. Vaginal examination: A thin, bloody exudate is noticed at the vaginal orifice, which is relaxed. Digitally there is felt a relaxed, scarred perineum. A number of odoriferous clots are found and removed from the vagina. The cervical os is dilated about half an inch, and presents a hard fibrous margin. The cervix itself is bilaterally lacerated. There is presenting at the cervical os a mass, presumably placenta. The uterine fundus is soft and distended to about an inch of the umbilicus. Further bimanual examination is negative. The patient shows no reaction to digital examination, as she is practically unconscious.

After considerable urging the family consented to her removal to the Methodist Hospital. She reached there about 9 p. m., and the usual pre-operative procedure was followed. Blood examination: Red blood cells 2,064,000, white blood cells 27,600, poly. 87 percent, small 11 percent, large 2 percent. Urinalysis: Albumen, plus one; otherwise negative. Husband's and two other individuals' blood proved incompatible for transfusion. Vaginal smears: Negative for G. C. The patient's condition at this time was so desperate that it was a problem whether local interference would be of any avail. She was given an intravenous of normal salt solution, and camphorated oil hypodermically, and reacted sufficiently that by midnight it was deemed safe to proceed. Pulse was 160, temp. 99.2 axillary (so taken on account of proctoclysis). Under very light gas and oxygen narcosis (because of restlessness) a non-adherent placenta of 2½ or 3 months development, and a number of large odorous clots were removed from the uterine cavity, which was then swabbed with 50 percent tr. iodine in alcohol solution, and firmly packed with gauze saturated with similar solution. One cc. of obstetric pituitrin was given and the patient removed to her bed. It might be stated here that there was no further uterine hemorrhage. The usual post-operative method was followed. June 19, 1921, 6 a. m., temp. was 100 3/5 rectal; pulse 164; pupils slightly dilated, and patient comatose. Condition critical. June 19, 6 p. m., temp. 102 rectal; pulse 130. General condition unchanged. June 20, 6 a. m., temp. 100 3/5 rectal; pulse 120. Patient restless, but seemingly unconscious of her surroundings. Uterine pack removed, no bleeding. Blood examination report: Hemoglobin 24 percent, red blood cells 1,712,000, color index .7, white blood cells 27,000, poly. 86 percent, small 10 percent, large 2 percent, trans. 1 percent. Quite a few nucleated red blood cells. Polychromatophilia. At 2:30 p. m. of this day she had a chill. Temp. 103 3/5 rectal, pulse 120

and bounding. Patient still unresponsive. At 5:30 p. m., temp. 104 rectal; pulse 118. We had been making effort to obtain a suitable blood donor, and late that evening were successful in finding one in the person of a young woman who weighed about 80 pounds, claimed to be 18 years, but looked about 14 years old. By 3 a. m., June 21, temp. 107 6/10 rectal, pulse 162. A blood transfusion (citrate of sodium method) was begun, but after about 200 cc. of blood had been drawn from the donor, she unfortunately collapsed, and no more blood was obtainable. However, this amount was given to the patient. June 21, 6 a. m., temp. 101 4/5 rectal, pulse 112. Blood examination report: Hemaglob. 25 percent, red blood cells 1,932,000, white blood cells 35,800, poly. 95 percent, small 2 percent, large 3 percent. At 6 p. m., temp. 101 4/5 rectal, pulse 100. June 22, 6 a. m., temp. 101 4/5 rectal, pulse 88.

At this time, four days after entering the hospital, the patient was conscious and seemingly rational, and stated she had no recollection of having seen me before and did not remember anything that occurred since about noon of Saturday, June 18. From this time on the temperature did not rise above 102 rectal, nor the pulse above 115, and by June 29, temperature and pulse became normal and remained so thereafter.

On June 23 the reddened area on breast became more painful, and a distinct tumefaction was noticed. On June 24 this had enlarged, fluctuated, and about noon ruptured spontaneously, evacuating—according to nurse's report—a pint or more of foul-smelling yellow pus. Microscopic report: Mixed strepto- and staphylococcus, strepto predominating. The abscess cavity was packed with hypertonic salt solution saturated gauze, and by June 29 the discharge had stopped, and the wound was practically healed.

The blood examinations for June 23, 24, 25 and 29 were as follows: June 23: Hemaglob. 25 percent, red blood cells 1,360,000, white blood cells 18,000. June 24: Hemaglob. 26 percent, red blood cells 1,760,000, white blood cells 16,000. June 25: Hemaglob. 26 percent, red blood cells 1,664,000, white blood cells 19,200. June 29: Hemaglob. 35 percent, red blood cells 1,768,000, white blood cells 10,000. June 23, report on blood culture, negative after 72 hours. Vaginal discharge, negative after 72 hours.

The patient was able to leave the hospital June 30, 1921, and at this time has fully recovered.

I am frank to state that I consider both of these cases somewhat atypical, for in case No. 1 the question arises, in view of a past history of malarial fever, whether the hyperthermia was malarial or not, and in case No. 2 whether the

sepsis was primarily genital or from the breast. 430 Bankers Trust Bldg.

DISCUSSION

DR. JOSEPH H. WEINSTEIN (Terre Haute): We have two distinct schools in this condition. One idea is to leave them alone in every instance; the other is always ready to do something, perhaps too often.

I think one very, very important thing that is not infrequently overlooked is the previous history—to know whether the infection is primarily puerperal, or gonorrhreal in origin. Of course if it is gonorrhreal in origin we are much safer in any operative procedure than if it were puerperal. These cases are fairly safe if they are left long enough. Frequently they cannot be reached from below, even though a fair quantity of pus may be present at some place, and entering the abdomen early is usually fatal.

Pulse and temperature are extremely important. We may have a case with a fairly high temperature, but if the cardiac condition is satisfactory I think we can safely wait on this case, and with the expectant treatment we will get better results. We cannot always tell whether the uterus is empty in any of these cases. They frequently will retain vile smelling clots and there will be no secundines present at all. The cervix may be contracted, retaining the clots, which will decompose and produce symptoms in the same way as retained placenta or the product of conception. So I do not subscribe to the school that believes in letting things alone too long. If the case does not respond fairly early, I can see no harm in very carefully dilating the cervix, as Dr. Jaeger says, never using the curette. We can use a wire pool, a sponge forceps, or something like that, which will do no harm to the uterus and will not open up any new avenues of absorption:

I think it is extremely important to determine the extent of the infection. If we have a peritonitis and infection is outside of the uterus and has entered the general system, then we have a septicemia, and I cannot conceive what good any surgical procedure is going to do outside of being certain that we have drainage of the uterus—that is, outside of general treatment that should be instituted.

In the case the doctor spoke of, in an anemic condition from whatever cause, transfusion is absolutely indicated; but in the average case I should hardly think that necessary although hypodermoclysis or proctoclysis would be indicated. The Fowler position and hypodermoclysis has done more than any other two measures towards curing these cases of infection.

I do not like to use irrigation of the uterus at any time, whether on the operating table or during the after treatment. I really do not believe it is necessary to use a tube in the uterus.

I think with the cervix thoroughly dilated you will have sufficient drainage, especially if pituitrin is given and that is followed by some tonic treatment with iron, nux and ergot.

I was much interested in the remarks of the doctor about the experiment with shot bags, etc. I never heard the matter presented in that way before, and there may possibly be something in it, if it acts as a splint to the abdomen, the same as morphine or opium acts as a splint internally.

DR. G. FRANK HOLLAND (Bloomington): I imagine this is the method followed by most of us in the care of these cases, especially those with immediate signs of infection. I have not used a sharp curette in these cases for a great many years, using iodine and plain gauze. I do not use the tube; I do not use irrigation in clearing out a uterus. Many times in the first hours of signs of infection we may be able to get sufficient dilatation to permit the removal of secundines with the index finger. I prefer blunt forceps, because you can much better differentiate that portion to which it is adherent and avoid greater physical damage to the uterus already infected and soft. In fact, I wonder sometimes at the success of the man who uses a sharp uterine curette. I congratulate him, because it is almost equivalent to scraping the inside of a wet paper bag.

External infections are found, many times, with rapid pulse, high temperature and increased pressure. I remember one case of diphtheria of a very slight tear in the perineum. The case had already been curetted and was found to be a local infection of the rent.

One of the problems of these tube cases that comes to all of us is the fact that so frequently you will find the doctor blamed as the cause of the sepsis in the case. In the case cited by Dr. Jaeger it could not have been attributed to that, but in many cases they say the doctor did not give the right care. They fail to consider the almost uniformly poor care given obstetric cases in the home. You will not find this type of infection so common in the hospitals. As you know, where there is a miscarriage there is no preparation and almost anyone is called in to assist. They are often the source of infection.

DR. A. S. JAEGER (closing): The reason I took this subject for discussion is because I believe it is at present of great importance and I do not think there have ever been so many cases of septic infection resulting from premeditated or accidental abortion, or miscarriage, as within the last five years. We can readily see how this has happened as a result of wartime infatuations and of hasty marriages, and many parties to such have taken the law into their own hands as to how many children they shall or shall not have. As a result of present economic conditions we will get such cases more

frequently for some time to come and we must decide what is the most rational treatment to pursue.

I believe Dr. Weinstein misunderstood me. I do not use blood transfusions only when the patient is *in extremis* because I believe that introducing new antibody formation factors directly from healthy human blood will more rapidly than any other means stimulate in the recipient's body an ability to overcome the infection.

I do not use the tube in every case, but only where it is absolutely needed, because in these cases I cease to feel that I am dealing simply with a uterus, but rather with an infected cavity, and I want the infective material washed and drained out. It is not imperative to use irrigation through the tube, but if there is contraction of the cervix without adequate provision for drainage one may have trouble.

Another interesting fact is this: In the last three months in my City Hospital service I have had considerably more than the usual number of acute inflammatory pelvic cases. Unfortunately our drug clerk was ill and not being able always to procure suppositories we had a chance to decide the difference between our opium combination in the rectum and morphine hypodermically. In the cases in which we were able to use suppositories, the patients were practically well in two or three weeks. In the case where we used morphine it took five or six weeks to obtain the same result.

NON-TUBERCULOUS INFECTIONS OF THE KIDNEY*

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Much has been written on pus infections of the kidney, but the importance of the renal function to the body economy is so great that we have another contribution on this subject will be of interest.

The difficulties of diagnosis without instrumental examination are sometimes unsurmountable. However, if kidney disease is suspected, in most cases it will be easy to arrive at the truth by ordinary methods. If early diagnosis is made and the proper treatment instituted more kidneys will be saved from total destruction.

The kidney as an excretory organ is of necessity affected by the general diseases of the body. Infections of the nose, throat, apical abscesses of the teeth, appendicitis and intestinal fermentation or any non-draining focalized infection give up bacteria and toxins which are at least partially eliminated through the renal tubules.

(1) *Exciting causes:*

(a) Mobility. Kidneys loose in the abdomen receive more or less traumatism in addition to the embarrassment of their blood supply

*Presented before the Section on Surgery of the Indiana State Medical Association, Indianapolis Session, September, 1921.

by the twisting of the pedicle, and furthermore by ureter kink, checking the free drainage of urine.

(b) Likewise external traumatism will lower the resistance of the cortex and pelvic portion of the kidney to the point of permitting the growth of bacteria.

(c) General debility. It is a well established fact the normal kidney will pass numbers of pathogenic bacteria through its tubules with no ill effect to its tissue. Debilitating diseases so reduce the functioning power and resistance of the kidneys as to make them very susceptible to pathogenic organisms.

(2) *Bacterial causes:*

(Scheidemantel Muench. Md. Wochenschr. 1913, Page 1722.)

Scheidemantel found in the examining of one hundred mild to moderately severe cases the bacterial cause to be colon or colon-like bacilli 84, bacillus-proteus 3, para-typhoid 1, influenza 2, diplococcus 1, staphylococcus 2, mixed colon and coccus 4, streptococcus 2, pyocyanous 1. We find our own cases run very close to this percentage, except that we have had two cases of pyocyanous and several cases of streptococcus infection.

The men who have studied the source of infection in the kidney are coming more and more to believe the blood stream is the vehicle of most infections. Since blood culture has been more extensively used this has been emphasized, for we have been able to demonstrate in the blood the same organism that is cultured from the original source of infection, and from the catheterized kidney urine.

The kidneys are richly supplied with lymphatics and have a fairly definite chain communicating with the ascending and descending colon as shown by Franke (Grenzgeb. d. Med. u. Chir. 1911 XXII, 623), but it seems that the lymphatic flow is from the kidney instead of toward it.

Eisendrath, of Chicago, worked out a chain of ureteral lymphatics ascending from the bladder to the kidney, but Cabot and Crabtree examining the same sections believe that this chain was not direct to the kidney, but drained into glands external to the ureteral walls. Thus it would not seem likely that the kidneys would easily receive infection through their lymphatic channels.

The question of infection ascending from the bladder through the lumen of the ureter has been debated pro and con for many years. It has been shown as quite unlikely in normal ureters for bacteria to progress against the downward flow of urine. However, in the presence of urethral stricture, enlarged prostate or other causes which produce an increased intra-bladder pressure it would seem possible for the ureters to dilate and lose the vermicular expulsive wave normally found. We have a slide

which demonstrates this condition. The urine from this dilated ureter was sterile and the man went through a prostatic operation without kidney infection, but it is our opinion that the colon-bacilli in the bladder would have invaded the ureter and advanced eventually to the kidney, had not the bladder neck obstruction been removed. Keyes in his Urology, very strongly insists that ascending infection is improbable, preferring to believe that the prostatic or bladder infection is carried by the lymphatics into the blood stream and re-excreted by the kidneys.

One other source of infection to the kidney is that of irruption from neighboring organs, such as diaphragmatic or hepatic abscess. These, of course, are rare.

Briefly the pathology of kidney infection is that of reddening, inflammation, congestion and swelling of the tubules and mucus membranes. The coccus infections seem to show predilection for the cortex portion of the kidney, while the colon bacilli are usually found in the pelvis and about the papillæ, each producing abscesses which eventually coalesce and empty into the pelvis. We hope to demonstrate by our lantern slides the various degrees of kidney change produced by these infections.

The symptoms of this disease are many, varied and often misleading. In the mild cases we may have frequency and possibly a burning upon urination, general malaise, loss of appetite, with none or a very small rise of temperature. These symptoms may be absent and the patient merely complains of a foul, turbid urine or a urinary sediment. Examination of such a urine specimen may show pus or only a large number of bacteria. The specific gravity is usually low. Pain or aching in the loin may be the only symptom, however, it will be well to discount the numerous other causes of backache by making an urinalysis.

We have recently had two cases who came because of symptoms of urethritis. In determining the cause of urethritis urinalysis was made and evidence of kidney disease found. The beginning of the kidney infection may be masked by the symptoms of such other diseases as tonsillitis, scarlet fever, typhoid, etc. Thus it would seem well to examine the urine occasionally during general infectious diseases without waiting for some specific indication.

In moderate to severe types there may be a sharp rise in temperature, and this frequently happens as the symptoms of the general disease are subsiding, leading one to suspect an extension or exacerbation of the tonsillitis, scarlet fever or typhoid fever. At this stage you should palpate the loins for tenderness and make an urinalysis. The temperature curve is irregular and may be interrupted by intense chills. In the very severe cases these chills may be as frequent as two or three times a day, racking the

heart and leaving the patient exhausted. The sub-costal pain is usually severe, but in rare cases that may be entirely absent, or vary with the degree of intensity of infection.

Pyelitis in infancy and childhood is more common than generally suspected. Danforth (S. G. & O. March 1920 XXX No. 3) speaking of the experience of the Gynecologic-Obstetric service of the Evanston hospital, makes the following statement: "The number of instances in which pus has been found in the urine of infants a few days old has been striking. It seems fair to assume that many unrecognized and therefore untreated infections of the kidney may be the starting point for urinary lesions of a more serious character in later life, and it is suggested that a careful routine observation of urinary findings during the first week of life in maternity hospitals and the active routine treatment of urinary infections revealed thereby would serve as a preventative measure of considerable value."

The onset is usually sudden and we find the child restless, flushed and feverish. There is rapid loss of strength and weight. The temperature curve shows all variations. If old enough, they will complain of abdominal pain, frequency and pain on urination. The urine will be of low specific gravity and show varying quantities of pus, the extreme cases will show a very high temperature, followed with prostration and death.

The common occurrence of pyelitis in pregnancy would seem to merit some discussion of the symptom syndrome in this condition. It is not uncommon to ascribe the urinary frequency in pregnant women to the growing tumor, or to the nervous and frequently unhappy condition of these patients. Pain in the loin is usually a prominent symptom even in the milder infections and should be an indication for a careful urinary examination. Urinalysis in women is of little value unless it is of a specimen catheterized directly from the bladder. It is well to remember that there may be no urinary symptoms, but should the bladder be involved with kidney infection the act of voiding may be very frequent or almost continuous. The general symptoms of temperature, chills and sweats will vary with the degree of the intensity of the infection. In this form of pyelitis as in other types there may be a complete closure of the ureter and temporarily there will be no pus found on urinalysis. This has occurred several times in our practice and in one notable instance of a woman of seven months' pregnancy there was a large abdominal tumor of the right side, which pushed the fundus of the uterus beyond the mid-line. Urinalysis in this case showed a small amount of albumin in clear urine, a few blood cells, and a few hyaline casts. This urine was later found to be coming from the left kidney. By cystoscopy and ureteral catheterization we withdrew in twelve hours sixty-eight

ounces of thick purulent urine from the right kidney, and had a complete subsidence of the right sided tumor formation. While in this case the temperature was not high, yet we have had several patients in the last few months that when the ureter block came on, the temperature rose to 105 and in one instance to 107. There may be no urinary frequency or burning in this condition, in fact the diagnosis may be extremely difficult, as the pain may not be in some instances proportionate to the gravity of the condition. Ureter blocks may present all the dramatic symptoms of the so-called acute abdomen, and it will require a fine degree of discrimination of the surgeon to accurately diagnose it. In fact we are coming in contact with cases who have had appendices removed, gall-bladders drained and every other manner of abdominal operations performed without relief in the presence of a kidney condition. It is well to remember in severe kidney diseases that we usually have a dry, red tongue, and in cases of extreme infectious toxemia we have seen vomiting frequently occur. Increasing drowsiness, hiccough, coma and convulsions may be the terminal symptoms.

Renal infection should be suspected in the presence of fever and toxic symptoms with obscure cause, especially if a pyuria or bacteriuria exist. Backache should be thoroughly investigated with the idea of the possibility of kidney disease, always remembering that the urinalysis may not show much in the way of pus in the beginning condition, or should there be ureter block. In the physical examination always palpate the loin in the endeavor to evoke tenderness in the costa-vertebral angle.

Deep abdominal palpation with counter pressure in the loin often discloses a large and tender kidney or a dilated pelvis full of pus. The pain of this condition may be present in the plane of the gall bladder on either side. It may be referred to a level of the appendix on either side or, as is well known, may radiate from the kidney along the course of the ureter into the testicle and inner side of the thigh.

In renal infection the urine will show a disproportionately large amount of albumin relative to the number of casts. Pus cells or bacteria will usually be found. It may be regarded as axiomatic that pus with a large amount of albumin with few or no casts indicates renal infection. Pus may not be found: (1) In very slight renal infection, (2) in the hyperacute focal suppuration pus may not be delivered into the kidney pelvis, in other words we have a true kidney suppression, which may be partial or total; (3) inflammation may block the ureter withholding pus temporarily or permanently from the bladder urine. In the latter two conditions we may have all the symptoms of the acute abdomen and the diagnosis cannot be made certain without the use of a cystoscope and ureter catheter. Such an examination will

show whether there is pus in either kidney urine, whether there is obstruction in either ureter, and if the catheters pass freely to the kidney we can demonstrate the quantity of urine excreted by each, the quantity of urea eliminated by each and the ability of the kidney to eliminate phenol-sulphone-phthalein or other diagnostic dyes. These tests are usually successfully made, even though the catheter enters the ureter but a few centimeters.

The x-ray combined with ureteral catheterization has been of an inestimable value for discovering stones and the degree of destruction in the diseased kidney. It also discloses to us displacement of the kidneys, stricture of the ureters, kinks and other dystrophies found associated with and causing kidney infection. We hope to illustrate the advantage of combined ureter catheterization and x-ray examination by our lantern slides.

Cystoscopy and ureter catheterization is the best method for finding the source of pus in the urine. We can segregate the infected urine from one or both kidneys and differentiate it from simple cystitis, prostatitis or seminal vesiculitis. It is also obvious that this is the best method of differentiating kidney disease from other abdominal affections.

Favorable prognosis in these conditions depends to a great extent on early recognition of the disease and the institution of proper methods of treatment. Failure in this respect brings on the severe destructive lesion which necessitates sacrificing the kidney. Even in the presence of ureter kink or stricture we are frequently able to re-establish good drainage from the kidney and secure a return of function, with an abatement of the infection. In bilateral pyelo-nephritis the prognosis is more grave. However, in this condition we have several cases which, with kidney lavage and hygienic treatment, and internal medication, we seem to be able to keep in a fair degree of good health even in the presence of undilatable ureteral strictures and permanent kinks.

Diet and Hygiene. It is well to remember in kidney disease that heavy ingestion of food or considerable exercise adds to the load of a crippled organ. It would seem best to reduce the diet to a point only sufficient to maintain a comfortable existence. By this we mean a reduction of the total diet and not the entire elimination of the proteins. It is a good rule in most all urinary infections to prescribe the drinking of large quantities of water. In the matter of diet we may well be guided by the degree of kidney insufficiency and intensity of infection and fever. Keeping the skin warm and moist increases the elimination through this avenue and decreases the material the kidney would otherwise have to excrete and thus lessens its congestion.

Hexamethylamine thirty grains daily as an average dose, but varying with the age of the patient and the degree of intensity of the infection, should be administered. The coccus infections usually flourish in the alkaline urine, so the addition of acid sodium phosphate, thirty to sixty grains a day, or sodium benzoate, will increase the effectiveness of the hexamethylamine. Conversely, the colon bacillus flourishes in an acid urine and a short period of alkalinization will be of assistance to its destruction.

In our treatment we must not neglect the possible causes of renal infection. If it follows the contagious and infectious diseases as scarlet fever and typhoid fever, of course treatment for these conditions have been previously established. But if its origin is unknown we must search out and eradicate the diseased teeth and tonsils, we must dilate the urethral strictures, we must remove the obstructing prostatic growth or eradicate the infection of prostate and seminal vesicles. Colitis and rectal abscesses and infection must be properly treated.

Congenital atresia of the urethra and ureter will require dilatation. A diverticulum can compress the ureter to the point of producing obstruction. We have recently removed such a diverticulum and will demonstrate by pyelogram the damage caused to the kidney and ureter.

Kidney lavage with the various solutions of vitillin silver or silver nitrate has been a great aid in the elimination of infection, mainly confined to the kidney pelvis and papillæ. The act of passing the ureter catheter or bouge, straightening kinks and dilating strictures or leaving a catheter in the ureter for hours at a time, has been of great assistance in relieving acute symptoms of high fever and toxemia.

It is possible to cystoscope children and there are instances of persistent infection, possibly aided by congenital atresia, which will be benefited by ureter catheterization and pelvis lavage.

Finally, in the fulminating cases where it is not possible to establish drainage of the kidney by ureter catheterization, nephrectomy or nephrotomy must be done. If at operation the kidney is found in bad condition extirpation is best, if the condition of the patient will permit an operation of such magnitude. In the very weak patients nephrotomy, with the establishment of drainage, and secondary nephrectomy may be a procedure of choice. Pyonephrotic cases especially with peri-nephritic abscesses will require a nephrectomy.

DISCUSSION

DR. CHARLES E. BARNETT (Fort Wayne): In the last portion of this thoroughly commendable paper the essayist speaks of the pyelitis of pregnancy. Had God known that we were going to get up on our "hind legs" he would have put a groove in the sacroiliac synchondrosis

sufficiently deep in the female to allow the ureters to bury themselves away from the pressure of the fetal head during pregnancy, thus avoiding subtotal ureteral block, or incomplete renal drainings. I have frequently made the statement that faulty drainage is the cause of nine-tenths of all disease.

One portion of the paper that is especially impressive is that showing Scheidemantel's statistics of 84 percent of *bacillus coli* infections. This tells me that the mucous membrane of the alimentary canal with its tributaries to other viscera contribute all but 16 percent of our infections—teeth, tonsils and all other infections only 16 percent. So a careful intake in the alimentary canal with thorough drainage would tend to eliminate 84 percent of kidney infections.

DR. BERNHARD ERDMAN (Indianapolis): It seems to me, as Dr. Barnett has said, that we all know this question of kidney infection is very largely that of all other renal infections—a question of drainage. These patients who have kidney infection have varying symptoms. Our greatest misfortune perhaps is that we see them too late. The instances of individuals who have kidney infection as a result of mechanical disturbance are quite numerous, and they can be taken care of by mechanical means, but the question of infection due to bacterial invasion is of the utmost importance.

I want to speak of these statistics of 84 percent of infections due to *bacillus coli*. You may say that *bacillus coli* is a rather common infecting organism. I believed it practically always present in acid urine until a few years ago when Dr. McDonald called attention to the use of large quantities of alkali, thus changing this reaction. This has been worked out very completely within the last few years by some of the men in the Brady Institute.

A well recognized procedure is lavage of the kidney pelvis, and attention to focal infections and intestinal tract infections is well recognized among those of us who do more or less of this work. But there are a few factors which I think should always be borne in mind. These individuals have almost invariably pus in the urine. There are exceptions, of course, where this pus is closed off temporarily. But a simple examination of the urine will, in a vast majority of instances, afford us a considerable amount of information. Frequently we have, in addition to the pus, bladder irritability and pain.

If the infection invades the kidney, it is questionable how much value we may get from lavage. We can lavage only the pelvis of the kidney. When we induce a solution into the kidney pelvis under such pressure as to bring about dissemination of the fluid within the mucous membrane itself, it is questionable whether we will benefit or damage that patient.

O'Conner, at the American Medical Association, brought out some interesting points in

relation to the injection of substances into the kidney pelvis and allowed to remain a given length of time. The new dye substances we are getting hold out some advantage in the relief of kidney pelvis infection, but if these infections extend down into the substance of the kidney we will not get much benefit from these.

Attention to the patient's general physical condition is an important factor in the treatment of kidney infections as in other conditions.

DR. H. O. MERTZ (Indianapolis): Dr. McCown emphasized in his paper our ability to detect anatomical variations in the ureter and pelvis by means of the pyelogram. It is not necessary to reiterate the need for such findings in cases where we contemplate operation, but, as indicated in the discussion of this paper, there are problems involved at the other extreme meriting further emphasis. I refer principally to those factors which influence the localization of the infection in the kidney, and which tend to prolong the infection. The mass of the germ as we study it does not have to be large. It is the exciting factor in our infective process; but the thing that is predominant in a majority of these cases is the predisposing factor, that something which interferes with our drainage, and if we are going to study the problem with the idea of being able to forestall the development of a renal infection and accurately establish a rational procedure in the treatment of a renal infection, when once established, with the idea of limiting its progress or completely eradicating it, we must limit our discussion very largely to the subject of the causes of urinary stasis. If the stasis is sufficient that we can accurately detect residual urine by the ureteral catheter, our problem is simple. In the treatment of such cases I sometimes doubt whether one particular drug in the use of irrigation has any virtue over another. I think it is very much a problem of overcoming obstruction in the ureter. I recall one case in which ureteral catheterization had been employed for six weeks, because of a pyonephrosis associated with pregnancy, and there had been no irrigation of the pelvis except to dislodge pus and mucous from the catheter and the temperature remained normal throughout the course of this treatment. It was not the result of any medicine in the pelvis, as none was used, but the direct result of mechanical relief afforded by the relatively stiff catheter in the ureter.

It would seem the urinary stasis is a frequent cause of the localization of an infection in the kidney through its lessening local tissue resistance and it is equally true that urinary stasis is a frequent accompaniment of an established renal infection and no doubt materially contributes to its duration, and must be considered in formulating any plan of treatment.

DR. D. F. CAMERON (Fort Wayne): I would like to emphasize the rapidity with which the

contents of a kidney pelvis are absorbed when the ureter is occluded. In two and a half to three hours after a kidney pelvis has been filled experimentally with a sodium iodid or bromid solution as is used in pyelography and the ureter occluded, the contents of the pelvis remaining give no test for iodin or bromin. All of it has been absorbed and the test for the salt is positive in the urine secreted by the remaining kidney. Similar results are obtained when dyes and India ink suspension is used. This explains why there is such a febrile reaction in cases of pyelitis with poor drainage when the same infection in the bladder where there is practically no absorption produces little or no reaction.

Personally, I cannot understand why the use of solutions of silver nitrate for pelvic lavage is so popular when it is realized that it is precipitated by the salts in urine and deposited in the kidney parenchyma where more or less focal necrosis is produced. I believe the dyes Dr. Erdman spoke of or similar substances would be preferable.

I was pleased to note that the fine pyelograms shown were made with sodium solutions which I introduced for pyelography.

REPORT OF APPENDICITIS CASES*

JAMES Y. WELBORN, M.D.

EVANSVILLE

This report comprises the most of the cases of this type seen and treated by Dr. Edwin Walker and myself and other members of the Walker hospital staff, during the years 1899 and 1920, inclusive. I have taken this period because it includes all my work except for the year of 1921.

There were a few cases operated in the home each year; some of these are included; those which are not mentioned either had no histories or they were lost. As time went on there were less operated in the home, as it is a certainty that the best results are obtained in the hospital, where all equipment is convenient and more experienced attention can be given the patient. However, our mortality in cases operated in the home is not bad. I do not expect every case to be brought into the hospital, because there are instances in which it is best for the patient not to be moved, so we are always ready to operate such a case in the home.

The general character of these cases is "an average type"; the report is made for appendicitis alone and shows many of all types; there were some distinct cases in which other operations were done which are not counted. I am certain there were a few hundred that were complicated in gall bladder and pelvic cases.

During the years covered by the report 1,761 laparotomies have been done and I am sure that the appendix was removed in seven-tenths of

them. During the past few years we seldom open an abdomen without removing the appendix. It is interesting to know that 60 per cent of all appendices show evidence of present or past infection. In gall bladder operations we do not always take out the appendix because in so many patients with a long incision there is a tendency for a gaping wound that is hard to close, so for this reason none except affected appendices are removed in gall bladder operative cases.

This series of cases covering a score of years shows variations in mortality; the causes are varied—a better surgical technique pertains in the latter half than in the first half. The physician treating the acute case now urges operation at once, wherein he formerly was more apt to follow the Ochsner treatment a few days under which treatment a certain number always became very severe—abscess or peritonitis cases. Then there is a growing tendency for people to heed the advice to go to the hospital early. The greatest factor in our decreased mortality is the "School of Experience" of the practitioner. After a physician sees one or two bellies opened which are badly stained with pus or show a badly necrotic appendix he can more forcibly persuade a patient to take radical treatment.

In this group of patients there has been no selection—all acute cases—regardless of their advanced stages, have been operated. The only ones we do not operate are those who refuse or those in which there is a distinct contraindication. Only operated cases are mentioned in this group.

It is quite instructive to the writer to know how inefficient some histories are, but it is quite agreeable to know that taking each five years as groups that the history-taking improves right along. You will see that the statistics are not complete because of inefficient histories occurring in the first ten years of the report.

I have made classifications in groups which show some interesting features. Group I consists of those under 20 years of age and shows a fair division in the sexes, but a greater mortality in boys; an overwhelming number of the gangrenous cases occurred in boys. I think this is not an end result reading because a gangrenous case let alone will usually develop a localized abscess. This idea is exemplified by the fact that we often find a gangrenous appendix in a localized abscess.

Group I—All Under 20 Years

Boys, 156; girls, 188; total.....	344
Fatalities—Boys, 14; girls, 10; total.....	24
Pus Cases	137
Gangrenous cases	41
Catarrhal cases	165
Mortality rate, 6.6%.	

Practically all in this group are acute; only about twelve were chronic. We see also that

*Presented before the Section on Surgery of the Indiana State Medical Association, Indianapolis Session, September, 1921.

considering the severity of the cases they show very good resistance, but not so good as the adults in group 2, which shows a mortality rate of 1.8%. The frequency of chronic cases and early operations in acute cases in the second group are the great factors in the low mortality.

Group 2

In the 20's.....	552; mortality 10
In the 30's.....	351; mortality 13
In the 40's.....	206; mortality 9
In the 50's.....	72; mortality 8
From 60 to 88.....	18; mortality 0
Unclassified ages	233; mortality 21
	1,432
	61

Mortality rate, 1.8%.

In the first group the youngest was a baby five weeks old with a gangrenous appendix in a strangulated hernia. This was secondary appendicitis; the case recovered. One child at one year and one at two years died; comparing with other young cases they do not show very good resistance under the third year.

Just to the contrary those people in group 3 are over 60 and show almost perfect resistance; these were ten males and eight females, eleven of them drainage cases. There were four cases over 80 years of age; the oldest was 88, a very bad abscess case. Nine of the eleven cases were abscess and two were gangrenous. The appendix was removed in all the cases.

Group 3

Over 60 years—Male, 10; female, 8.
Drainage cases, 11.
Four cases over 80 years.
Deaths, none.
Total number of drainage cases..... 566
Total number of cases of appendicitis..... 1,776

The chief interest in this report is an analysis of fatalities:

Acute Septic Absorption: 5 cases. This was in the earlier days when Fowler's position, Murphy drip and hypodermoclysis were not given. We think now that there seldom ought to be a fatality from this cause.

General Peritonitis: 27 cases. No matter what the treatment is, there will be an occasional loss by this cause.

General Sepsis: 27 cases. Many in this group are more than 15 years ago and may have been acute septic absorption or peritonitis, however there will occur such cases which linger along and finally in from one to four weeks become exhausted and die of sepsis.

Pneumonia: 4 cases. These were adults who seemed to have an extension of the infection into the lung on the same side. There were several others who developed abscess and after drainage recovered.

Shock: 2 cases. One was a young adult, 16 years of age, the other was a patient 41 years of age. These were diagnosed shock and recorded as such. In reviewing the history I

think they could have been distinct shock yet why not say acute septic absorption?

Pulmonary Embolism: 7 cases. This is shocking because most of these cases occurred at about the end of the second week when the patients were ready to go away from the hospital. Three of them were robust men who had had acute attacks and who had had drainage which had closed. I think the chief cause of this was either a phlebitis in the involved mesentery or in those cases where the appendix lay low and adjacent to the ileac veins.

Obstruction of the Bowels: 3 cases. Usually due to adhesions; in the group some others were saved by the second operation.

Tetanus: 2 cases. Both little girls; one theory advanced was that the tetanic germ may have come from the lumen of the bowel through the stump of the appendix. I doubt this very much. We cauterize the stump with phenol as a precaution against this or other infections. One of these cases had a slight scratch on the foot eleven days previously; this I thought was a more likely cause. One of these cases did not have the phenol cautery—the other had no record of it.

Doubtful: 8 cases. This group is made from histories not having a distinct cause of death given.

Pulmonary Tuberculosis: 1 case. This case had an acute exacerbation in a very chronic case of T. B. and lived but three weeks.

Acute Dilatation of the Stomach: 1 case. This is not a recent case and I do not recall the incidents except that all the symptoms pointed decidedly to this diagnosis and death occurred about the 5th day.

Tubercular Peritonitis: 1 case. This case was apparently a case of tubercular peritonitis which originated in the appendix but was extensive when operated and the patient lived three weeks.

Uremia: 2 cases. Both cases, one 59 and the other 55 years of age, suffered from typical suppression, showing casts and albumin, therefore nephritis was the attributed cause.

Coma: 1 case. I have not the sufficient data to explain this case, but think it was acidosis.

Empyema: 1 case. This was one of secondary infection of the pleural cavities and death occurred without drainage of the pleura.

CONCLUSIONS

Early diagnosis is the very most important thing, for until the diagnosis is made, an operation is not even thought of.

The old theory of considering the time of the beginning of the disease is not reliable because we find in most of these cases it is difficult to tell when the disease began, especially in children. One of the causes for many severe cases is the purging of the bowel by the practitioner the first two or three days; this is when there is abdominal pain which is due to peritonitis.

This gives the disease a chance to advance during the effort to move the bowel by purgatives.

A great many of the abscess cases and some of the advanced peritonitis cases that come in are those that have been treated by the "starvation" method, usually called the "Ochsner Method". Many physicians who believe in operations follow this until the case is very bad off, therefore I think it is a physician's duty in all cases to recommend the best treatment to be immediate operation.

Appendicitis is very frequent, many attacks mild in character are never diagnosed even by the best physicians and surgeons. Such attacks may be recurrent without becoming severe, and have caused many practitioners to consider the medical treatment.

Regardless of the symptoms, to correct the cause I think the safest recommendation is an immediate operation in all cases, but when operation is absolutely refused, then the abstemious treatment is permissible. I think we should no longer consider the third day as a criterion in judging when to operate because if an operation is necessary at all, the sooner the better. The patient will stand operations better either early in the disease or late in the disease; for instance, there is some advantage early because there is not so much involvement and the condition of the patient is prepared for its phagocytic protection. But from the fourth to the eighth day at the period, when a great many of these patients are apparently better, there is probably less defense in the system. From the eighth to the twelfth day secondary abscesses are prone to occur and many of these cases have been brought in at that stage; at this time an operation is perfectly safe.

I find in the histories that most physicians take mouth temperatures. This is never absolutely accurate in any sickness and especially so in appendicitis. In serious illness of any type, rectal temperatures ought to always be taken. Many cases of appendicitis that have one degree of fever by mouth show four or five degrees per rectum.

Motto: "Early to diagnose and early to operate will reduce mortality statistics materially."

DISCUSSION

DR. G. D. SCOTT (Sullivan): In my short experience I have found that complications are more common in children than in adults. This I believe is true for two reasons. First, peritonitis is more common in children than the walled-off abscess. We do not have the protection of the wall and get more rapid absorption. Second, we have a higher position of the appendix in children than we do not have ordinarily in adults. Very often we find the appendix as high as the gall bladder, sometimes even around the stomach on the left side. Peritonitis in this region is dangerous, because of the rapid absorption of toxic bodies through

the stomata peritoneal surface of the diaphragm. Recently I had two cases of appendicitis in children following a tonsillectomy. In both cases, appendicitis developed within less than one week after the tonsillectomy, and in both the tonsillectomy was preceded by acute tonsillitis. In both cases there was diffuse peritonitis, and in one, post-operative intestinal obstruction which was relieved by a secondary operation.

As to the cause of the mortality in appendicitis, I believe there are two primary causes. One is delay on the part of the attending physician or the patient, and the other is the use of cathartics. I believe there are more people killed by the use of castor oil and salts than any other drug.

I fully agree with the essayist as to the time to operate, and that is as soon as the diagnosis is made. I cannot see any indication for expectant treatment when an abdomen is filled with pus. Open the abdominal cavity under nitrous oxide and local anesthesia—there is but little shock even in the worst cases—and then is the time for expectant treatment.

DR. JAMES Y. WELBORN (closing): The doctor mentioned the point of diagnosis in reference to operation. If we always understood just what was inside it might be safe to wait in some cases, but I have seen diagnoses made in acute attacks which the doctor did not think were very serious; but as the doctor said, the delay increases the mortality. I have seen cases that we did not diagnose until after two or three years, the attacks were so light. But now at the second attack the operation is done. It is safer to imagine it is a severe case than to say it is a light case. As the years go by our mortality decreases, and if we keep on studying the disease I think we will lower our mortality materially.

A NEW HISTOLOGY OF RED BLOOD CORPUSCLES AND STAINING TECHNIC

E. L. DEWEY, M.D.
WHITING, INDIANA

INTRODUCTION.—Writers of histology and physiology invariably have described the red blood corpuscle as "a structureless, homogeneous mass". The facts here presented, I believe, show the falsity of that theory. My stain and technic were worked out in the laboratory by months of painstaking experimental endeavor.

My work has been seen and criticized by a few members of the medical profession. The principal criticism of this strange blood picture is: "It is very beautiful, but probably a trick of chemistry." The falsity of this criticism is proven in the following manner:

1. A specimen of blood fixed and stained by my method, decolorized by acid alcohol and re-

stained with one of the blood stains in common use, shows no appreciable injury histological or otherwise to the red blood corpuscle.

2. Blood fixed and laked by the usual technic and stained with my stain gives a picture of the red blood corpuscles normal in every respect as we have been accustomed to seeing them.

3. My staining shows in nearly every specimen red blood corpuscles that have been injured in making the smear, in which some of the segments have been broken loose and are seen just outside of the injured corpuscle. Proof that they existed and were there before fixing or staining.

4. Over acidity of my stain with carbolic acid causes the corpuscle segments to shrink into globular forms of various sizes, appearing on the surface of the red stained corpuscle as pale neutrophilic granules. The same picture occurs in over acidity with acetic acid, except the granules are basophilic.

Can any accident or trick of chemistry produce the blood picture shown here; with the various staining characteristics of the red blood corpuscles, repeated many times with uniform results? I do not think so.

The importance of this new histology of the red blood corpuscles to the medical profession in general, and to the physiologist and pathologist in particular, is obvious, and any discussion in that direction by me would be superfluous. This new histology was discovered by me December 14, 1921. E. L. DEWEY, M.D. Whiting, Indiana, April 17, 1922.

THE RED BLOOD CORPUSCLE HISTOLOGY*.—The red blood corpuscle is a very definitely organized structure composed of a central or supporting membrane, "the structureless, homogeneous mass," which is covered completely with very delicate membranous segments, individual and separated from each other by an entre-segmental membrane. The periphera of the corpuscle is surrounded with a delicate membrane which supports the peripheral segments. (Plate I, B.) The peripheral membrane and the entre-segmental membrane take the basic stain.

The peripheral segments are fairly uniform in size and arrangement, presenting a picture not unlike the cross section of an ear of corn, the kernels representing the peripheral segments. In the full size matured corpuscles the number of these peripheral segments varies from eleven to twenty or more. The highest number counted by me is twenty-six, the average being about sixteen. In the small and young corpuscles I have seen as few as five or six. (Plate I, E.)

The segments which occupy the central stroma of the corpuscle are irregular in size and shape. In the young corpuscle, there may

be no central segments; or only one or two. (Plate I, E.) Those of the periphera occupying the whole surface of the corpuscle.

In from 80 to 85 percent of red blood corpuscles the segments all take a pale neutrophilic stain with rather a pinkish tint. (Plate I, A's.) The other percentages take a heavy basophilic stain with a metallic lustre. In some corpuscles this characteristic is manifested in all of the segments, central and peripheral (Plate I, F), some only the peripheral segments (Plate I, D), and others only the central segments (Plate I, C); still others mixed, a portion of the central and of the peripheral segments basophilic (Plate I, H, I.) and others a segment or segments here and there, basophilic (Plate I, G, J.).

It is my theory that the corpuscle segments carry gases and perhaps fluids of the blood, and that the kind of gases or fluids carried and their reaction determine the different staining characteristics shown here.

Corpuscle segments are destroyed and disappear with the escape of their gases or fluids in all of the ordinary methods of fixing and staining blood, which eliminates any chance or possibility of showing them in the finished specimen.

DEWEY'S BLOOD STAIN TECHNIC.—Place in a graduated bottle of 400 cc. capacity the following solutions, in the order named:
Sat. aqueous solution *Eosin*, W. S.¹...30.00 cc.
Sat. aqueous solution *Aniline Violet*²...60.00 cc.
1% aqueous sol. *Sodium Bicarbonate* 60.00 cc.

Place in a water bath, the water of which comes to the level of the solution, or a little above, and boil 30 minutes. Remove from the water bath and while still boiling hot add 95 percent alcohol to 300 cc. Shake well for a few minutes and set aside to cool; then filter.

Dissolve the precipitate collected on the filter paper in 95 percent alcohol by rubbing up well in a mortar. Add to filtrate and enough more alcohol to bring the total volume up to 640 cc. Add distilled water 80 cc., and 40 drops of saturated alcoholic solution of *Aniline Violet*^{**}. Neutralize with 1 percent acetic acid solution. The amount to be used is determined by titration as follows: Take 1 percent aqueous solution of sodium bicarbonate 60 cc., place in a beaker and boil a few minutes to drive off the hydrogen atom and CO₂. Add three volumes of water and three or four drops of phenolphthalein indicator. Titrate with 1 percent acetic acid solution until the solution shows only a very faint trace of the pink color. If tested now with litmus it will be found neutral. The buret reading will indicate the amount of 1 percent acetic acid solution which is now added to the stain.

Filter. This constitutes the STOCK to DEWEY stain and keeps indefinitely.

*Demonstrated at a meeting of the Lake County, Indiana, Medical Society, Gary, Ind., March 9th, 1922.

(1) E. Leitz, New York. (2) Merck & Co., New York.

FORMULA No. 8.—So numbered because it was the eighth formula made from the stock stain just described, and the first one that showed completely all of the segmentation of the red blood corpuscle:

Stock Stain.....50.00 cc.
1% Aqueous solution acetic acid.....5.00 cc.
1% Aqueous solution carbolic acid liq.³ 5.00 cc.

Mix well and filter. The stain is now ready for use. Use only distilled water in making solutions.

Acetic acid solutions used should be titrated with N/10 standardized solution of sodium hydroxide. This for the reason that over acidity of the stain, which causes failure, may be corrected. And to do this it is necessary to know the alkaline equivalent of the acid solution used in making the stain. In the formula given above, the alkaline equivalent of the acetic acid solution used was, 1.80 cc. of the acid solution was neutralized by 1.00 cc. N/10 standardized solution of sodium hydroxide.

MAKING THE SMEAR.—In this procedure, as in all others that follow, the student must remember that the red blood corpuscle is a delicately organized structure, consisting of a central or basic membrane which is entirely covered with hollow membranous segments which carry gases and perhaps some fluids of the blood; and that these segments are destroyed and disappear in all of the ordinary methods of fixing and staining. This has been kept constantly in mind in working out my technic. To preserve these delicate membranous structures, and show them in the finished specimen, the technic is herewith presented.

PREPARATION OF THE SLIDES.—Make perfectly clean by washing in water, then alcohol. Heat over an alcohol flame or Bunsen burner until all moisture has disappeared. Allow to cool.

THE SMEAR.—Prick the lobe of the ear or tip of the finger in the usual way. On the edge, near the distal end of a second slide collect a small drop of blood, press it down, drop edge first onto the prepared slide until the drop is completely flattened out. Separate the slides by a quick swipe in the long axis of the slide being smeared.

Allow the smear to dry in the air at ordinary room temperature for ten minutes.

FIXING THE SMEAR.—Immerse in Squibb's Ether¹ that has not been previously opened or used, for one hour. Remove from ether and allow to dry without washing.

STAINING.—Immerse in DEWEY's stain No. 8, from two to ten hours, according to intensity desired. Beautiful and contrasty specimens are produced in from three to six hours. If it is desired to study the blood platelets or leucocytes, the longer exposure is recommended.

Wash the specimen in running water for five minutes. Dry in the air at room temperature. Immerse now in aniline oil water for five minutes. Remove and immediately plunge into a diluted solution of *Methyl Violet*² (made by adding a few drops of the concentrated alcoholic solution to 100 cc. of distilled water) for five minutes. Wash in running water for ten minutes. Dry in the air at room temperature. Mount in balsam in the usual way if it is desired to preserve the specimen for future reference.

The use of aniline oil water mordant and methyl violet counter stain brings out the peripheral and entre-segmental membranes, and differentiates the corpuscle segments from each other.

CAUSES OF FAILURE.—The general rule and principle, "careful attention to details," essential in all laboratory work, must be remembered here.

INDICATIONS OF OVER-ACIDITY OF THE STAIN.—Red blood corpuscles are laked by acetic acid in sufficient concentration with the giving up of blood gases and the disappearance of the corpuscle segments. A slight over-acidity of the stain with acetic acid causes shrinkage of the segments into globular forms of various sizes which appear on the stroma of the red stained corpuscle, as basophilic granules. This also is the picture when the stain is over acid with carbolic, with this difference, the granules are pearly like neutro-basophilic.

Over-acidity with acetic acid may be corrected by the careful addition of a very small amount of N/10 standardized solution of sodium hydroxide. In the case of over-acidity with carbolic acid, more stock stain may be added and acetic acid in proportion.

Before attempting to correct a supposed over-acidity of the stain be sure that all other factors that cause failure have been eliminated. The use of ether that previously has been opened, exposed to air or light, or that previously has been used as a fixative, causes failure. The corpuscle segments shrink into globular forms much in the same manner as when the stain is over-acid.

OTHER CAUSES OF FAILURE.—(1) A smear too thick, (2) Exposure of smear too long to atmospheric conditions before or after fixation, (3) Smear made on a moist or dirty slide, (4) Exposure of smear to heat above body temperature, (5) Allowing the smear to be exposed to the fixing ether too long or too short a time.

The worker with this technic and stain perhaps will save time and prevent annoyance and mistakes by setting aside a portion of a stain that has been made correctly and successfully,

(3) Phenol Liquefactum, U.S.P.

(4) Ether Squibb, for anesthesia, E. R. Squibb, New York.

(5) E. Leitz, New York.

to be used as a control in making and testing new stain.

My stain seems to improve with age. The

first formula that I made that was successful has been in use over four months and still gives brilliant and contrasty specimens.

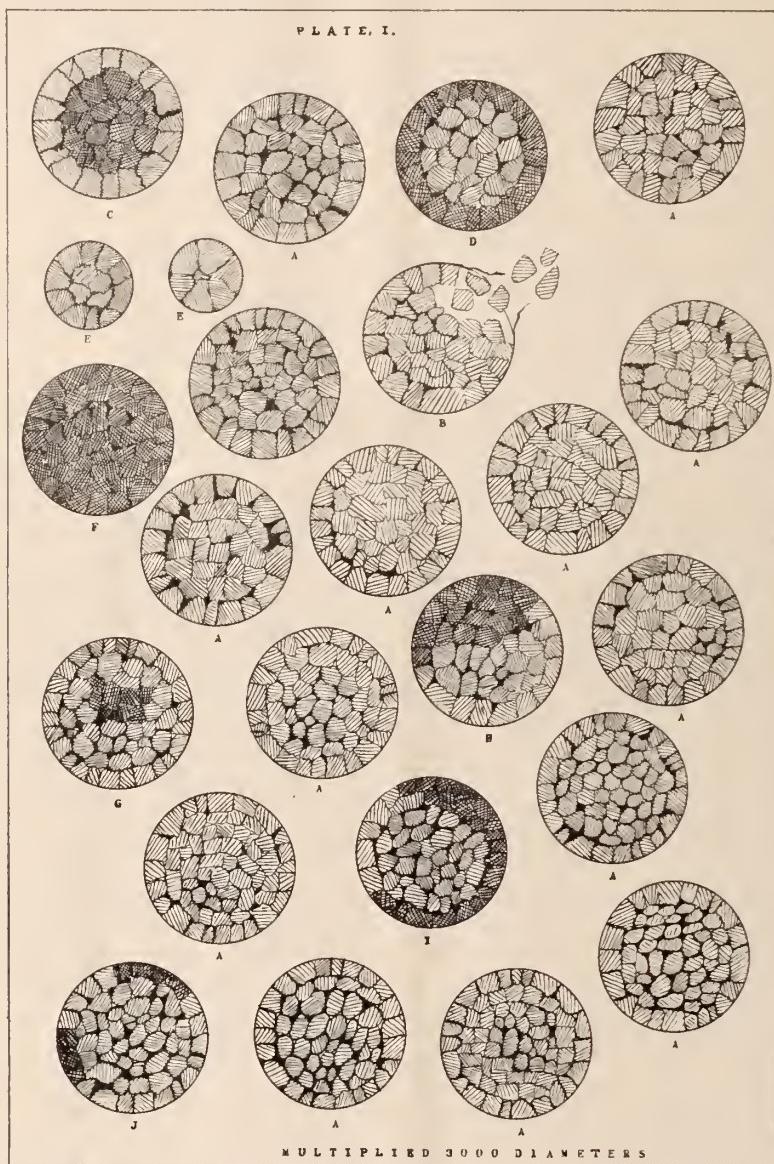


PLATE I

Drawings from microscopical specimens of normal blood, multiplied three thousand diameters:

A's—Red blood corpuscles with all neutrophilic segments. F—All basophilic.

B—A neutrophil that has been injured in making the smear, showing broken peripheral membrane and displacement of corpuscle segments.

C—Central segments basophilic; peripheral neutrophilic.

D—Peripheral segments basophilic, central neutrophilic.

H, I, J—Mixed basophilic and neutrophilic.
E—Young neutrophiles.

"THE STRUCTURELESS HOMOGENEOUS MASS".

If the student desires only to study that portion of the red blood corpuscles, then allow the blood smear to remain in the fixing ether 24 hours. This removes all of the blood gases or fluids from the corpuscle, with the disappearance of the corpuscle segments. Stain with DEWEY Stain No. 8.

Wonderful contrasty and brilliant specimens result. The "structureless homogeneous mass", taking a beautiful deep red stain evenly throughout the stroma.



WILLIAM R. DAVIDSON
EVANSVILLE

President of the Indiana Medical Association, 1921-1922



THOMAS M. JONES
FIRST VICE PRESIDENT
ANDERSON



J. H. REED
SECOND VICE PRESIDENT
LOGANSPORT



CHAS. N. COMBS
SECRETARY TREASURER
TERRE HAUTE



A. S. JAEGER
CHAIRMAN SECTION ON SURGERY
INDIANAPOLIS



C. H. McCASKEY
CHAIRMAN EYE, EAR, NOSE & THROAT SECTION
INDIANAPOLIS



GEO.G.RICHARDSON
CHAIRMAN SECTION ON MEDICINE
VAN BUREN



H.W.MCDONALD
SECRETARY SECTION ON SURGERY
NEWCASTLE



E.M.SHANKLIN
SEC EYE EAR NOSE AND THROAT SECTION
HAMMOND



B.R.KIRKLIN
SECRETARY SECTION ON MEDICINE
MUNCIE

THE MUNCIE SESSION

On September 27, 28 and 29, the Indiana State Medical Association will meet in annual session at Muncie, as the guests of the Delaware County Medical Society, assisted by the Muncie Academy of Medicine. Although because of the renown of its medical societies Muncie is pleased to be able to entertain the state medical association, Muncie citizens always rejoice in acting as hosts to large groups of visitors as it gives them the pleasure of acquainting the guests with the general excellence of this city and of converting strangers into friends.

Muncie has interesting proof of its varied and romantic history, from the times of the Delaware tribe of Indians and Chief Munsey and Chief Tecumseh, through the struggles of the white pioneers, the gas "boom", and to the present industrial prominence, which is supported by one of the richest farming districts in all Hoosierdom. And Muncie citizens will not forbear until their guests know at least a resume of the city's history and a smattering of her present (as they consider it) approach to perfection.

By a treaty with the general government, probably the treaty of 1818, a tract containing 672 acres, lying on both sides of White river, was reserved and at the time was held by a Delaware Indian, a widow named Rebecca Hackley. The sale of this reserve to Goldsmith C. Gilbert for the sum of \$960 was transacted about 1825. The settlement began to develop until, in 1837, Munseytown, or Muncietown, as it was then named, was a community of 320 inhabitants. In this year, according to the first issue of the "Muncietonian", the first publication of the locality, "A superb court house, with a cupola, etc., 45 feet square and 28 feet high, is to be built."

That the development of the transportation facilities was even then in the public mind is shown by the further quotation from the journal that "The contemplated Central Canal will pass through this place and the connecting link, either by canal or railroad, between the Central and Whitewater Canals, will in all probability terminate at this point."

In 1845, through an act of the legislature, the name was shortened from Muncietown to Muncie. In 1854 Muncie was declared by the county commissioners to be a corporate town, and eleven years later, when the population had reached 2,196, the town was incorporated as a city.

For more than three decades there was a steady growth, with the activities of the citizens tending rather to industry, when, in the fall of 1886, gas was found in the county and the famous boom was on. It was a time of

wild speculation and romance which almost resembled the gold rush of the "'49ers" and the later dash to the Klondyke. Capitalists flocked in and real estate, the object of the speculation, was tossed higher and higher. The citizenry was virtually insane.

To quote from Dr. G. W. H. Kemper's historical account: "It soon became the boast that Muncie had no coal or wood yards, that twelve dollars a year paid for all the gas needed for fuel and light. Gas supply is unlimited, there is enough to last a thousand years, a well may be placed on every forty acres or even less and will continue to produce gas for all time. Such was the optimism at a time when nearly every day marked the increase of output by millions of cubic feet. For several years the people indulged in riotous extravagance with nature's gift. * * * The gas was allowed to burn day and night. At noon tide, as at midnight, the roaring flambeaux that stood by the roadside and at the crossroads in the country consumed gas by thousands of feet, but never once was there a thought of checking it. The horizon was aglow from thousands of gas lights, and some farmyards were so brightly lighted that the chickens never knew the proper time to roost."

Following the cessation of the original "mushroom" boom, there began a big industrial growth which forecasted Muncie as the "Birmingham of the North". This growth was more enduring, as is evidenced by the fact that some of the industries then attracted to Muncie are still in existence and are among the leading manufactories of the city today. In 1887, the Muncie Board of Trade was organized as a corporation "for the promotion of any and all undertakings calculated to advance the interests, improvement and general welfare of the City of Muncie". It is significant that this body's first president, J. A. Goddard, is still the active head of the Joseph A. Goddard Company, wholesale grocers.

Probably the greatest factor in Muncie's industrial development was the Citizens Enterprise Company, which was organized in 1891 to promote the industrial interests of the city and especially to secure additional factories. Numerous substantial firms were thus attracted until, in 1895, despite the fact that the panic of 1893 was just past, the city had twenty-seven industries, with 5,680 employes and a monthly payroll of \$241,500.

Once again there was a period of steady growth, which was quickened in 1900 when the interurban line between Muncie and Anderson was put in operation. Soon afterward cars

were run through to Indianapolis; by 1903 the traction lines north to Eaton and east to Selma were in operation; and in 1906 the Portland line was opened.

MUNCIE'S MEDICAL SOCIETIES

It is especially meet that Muncie be host to the annual session of the Indiana State Medical Association as this city is the home of two really great medical societies, one of which is among the oldest in the state and the other now undoubtedly one of the most important and one of the largest local societies in the Middle West. These are the Delaware-Blackford Medical Society and the Muncie Academy of Medicine.

The first practical steps toward the organization of a medical society in Delaware County were taken in April, 1865. Dr. S. V. Jump, president, and Dr. N. W. Black, secretary, were the first officers. The Delaware County Medical Society was later reorganized several times to conform to the requirements of the State Medical Association, but the society has never failed to exist and function. As far as can be learned, Dr. G. W. H. Kemper of this city is the only living physician who was a charter member of the body.

In the latter part of 1916 it was thought expedient by the officers of both the Delaware and Blackford County societies that the organizations unite, and this was accomplished under the name of the Delaware-Blackford Medical Society, which name it continues to bear. A considerable measure of the success of the society is credited to Dr. U. G. Poland, of this city, who served as secretary for twelve years, and to Dr. H. D. Fair, who held the same office for eight years.

The Muncie Academy of Medicine, now one of the largest local medical societies in Indiana, is the outgrowth of the old "Quiz Club," which had its origin during the winter of 1914, when Drs. D. M. Green, U. G. Poland, E. S. Green, O. E. Spurgeon, H. D. Fair and C. M. Mix began weekly sessions for the discussion of medical, surgical or allied pertinent topics. The weekly discussions, conducted by the alternately serving "quiz masters", attracted rapidly increasing groups, until a few months later it became necessary to reorganize and broaden the scope of the society. This reorganization was effected on October 16, 1914, and the present name was adopted. Drs. O. E. Spurgeon, president, and H. D. Fair, secretary, were the charter officers.

Changes in the programs were made as the Academy grew. In addition to the quiz, a paper on some scientific subject was read by one of the members at each meeting. Abstracts of these papers were printed in the JOURNAL of the Indiana State Medical Association, and the favorable comment received from many sources indicated that physicians in other parts

of the state appreciated the work of the Academy. It was deemed expedient at this time to appoint a critic, and Dr. I. N. Trent was the first to hold this position. The critic's part in the weekly programs added much to the interest and usefulness and often the humor of the occasion. Soon physicians and surgeons from surrounding cities began attending the academy meetings and, during the past year or more, the more attractive programs have drawn attendance from all sections of the state and from adjoining states. Leading specialists from all sections of the country have addressed the meetings. All of the most prominent medical schools have furnished a large quota of speakers, whose presence is in constant demand at the biggest gatherings of medical men in the country.

Under the administration of the present officers, Dr. B. R. Kirklin, president, and Dr. R. L. Beeson, secretary, with the assistance of Dr. Will C. Moore, chairman of the program committee, the Muncie Academy of Medicine has become probably the best known local medical organization in the Middle West.

At the present time the Academy meets on three Friday nights each month. The membership is over the 150 mark, but the attendance is often more than 200, and has occasionally approached the 300 mark. It is virtually a sectional organization, as its roster includes the names of the leading physicians and surgeons of Anderson, Marion, Alexandria, Hartford City, Richmond, Newcastle, Dunkirk, Portland, Winchester, Redkey, Ridgeville, Saratoga, Union City, Middletown, Mt. Summit, Selma, Parker, Farmland and Indianapolis. More than fifteen Indianapolis members are active in the Academy. The honorary membership includes noted medical men in Baltimore, Boston, Chicago, Cleveland, Cincinnati, Columbus, O., and at the Mayo Clinic in Rochester, Minnesota.

HOSPITAL FACILITIES

The hospital facilities of Muncie are a little cramped at the present time, as we have only one hospital, which is the Muncie Home Hospital. It is a non-sectarian, non-political institution of fifty beds capacity, and is under the management of a Board of Governors, which is composed of eleven representative business men of the city. In former years there were three hospitals in the city of Muncie, all of them small, private hospitals. In 1914 Dr. G. R. Andrews, one of our local surgeons, built the present Home Hospital and ran it as a private institution until 1917, when it was sold to the present management and has since been run as a public institution.

The hospital is a closed-staff hospital, and is operated under the minimum standards laid down by the American College of Surgeons. The staff is divided into two groups, namely, the general staff, which is composed of all the physicians who are privileged to practice in the



COURT HOUSE



INDIANA STATE NORMAL SCHOOL

hospital, and the executive staff, which is a group of twelve carefully selected physicians of the general staff, who are appointed annually by the Board of Governors. The chief of staff and the secretary of the staff are elected annually by the executive staff and confirmed by the Board of Governors. The executive staff is solely responsible for the professional conduct of the hospital, but has nothing to do with the business of the hospital. Every member of the general staff is compelled to make application for the privilege of practicing in the hospital before he is admitted to the staff. He is then assigned to the service he cares to be assigned to, providing he is found competent to be in this service. His application is approved by the executive staff and the Board of Governors. The hospital operates a training school for nurses which at the present time consists of twenty students. The school for nurses of the



HOME HOSPITAL

Muncie Home Hospital ranks as one of the best among the various training schools of the state.

Adequate pathological, clinical and x-ray laboratory facilities are maintained. The pathological and clinical laboratories are fully equipped to do all types of laboratory work, including basal metabolic work, blood chemistry, etc. The x-ray laboratory is also very fully equipped and they are now installing a 20-inch spark-gap treatment apparatus.

As before stated, the capacity of the hospital is very inadequate. However, the management has been assured during the last few weeks of funds sufficient for an additional 75 or 100 beds and building plans are being rapidly formulated for a new wing which will be a very modern improvement. This gift to the community comes from the Ball Brothers, who have so liberally given to all worthy enterprises in this city, having recently given away one million dollars to be used for community purposes.

HOTELS, TRANSPORTATION FACILITIES, ETC.

With possibly two exceptions, no city in Indiana is more adequately situated as to hotel facilities to entertain the annual session of the



HOTEL ROBERTS

Indiana State Medical Association than is Muncie. In fact, during the past eighteen months this city has attracted so many conventions that it ranks probably next to Indianapolis as a convention host.

Largest and newest of Muncie's hotels is the magnificent Hotel Roberts, which Muncie citizens boast of to all comers and which will be headquarters for the Muncie Session in September. From the amusement parlors and grill room at the bottom to the uppermost of the 270 guest rooms, the Hotel Roberts is absolutely complete. It is also well situated for convention convenience. It is two blocks from the Union Station and two blocks from the Traction Terminal Station. Traction cars from Indianapolis over the Anderson division pass the hotel and those on the Newcastle division stop one block away. The Roberts is directly across the street from the postoffice and from Federal Park, one of the smaller city parks.



HOTEL DELAWARE

The Hotel Delaware is fully as conveniently situated, as it is two blocks from the Traction Terminal Station and all outbound cars on the

Anderson, Fort Wayne, Portland and Union City lines pass it.

The New Kirby Hotel, while close to the center of the business district, is in a somewhat quieter place. One of its chief advantages is that it is only a few yards from the Muncie Chamber of Commerce building.

The Braun Hotel is two blocks from the Chamber of Commerce building and is on the Fort Wayne and Portland traction lines. There are several other smaller hotels in the city which road service to the south and north is offered will provide ample accommodations for the visitors at the Muncie Session.

Visitors to the Muncie Session this fall will find Muncie easily accessible from all directions, both by steam and traction lines. This city is on the St. Louis-Cleveland division of the Big Four, which passes through Terre Haute, Indianapolis, Anderson, Muncie and Union City, in this state. Through service to Cincinnati or Chicago may be had on the C. & O. line. Rail-on the Fort Wayne-Connersville division of the L. E. & W. The Pennsylvania lines branch train from Muncie to Converse connects at the latter station with the main line of the Pennsylvania, from New York to Chicago. Almost hourly service from every direction is offered by the Union Traction Company. Passengers from Indianapolis have similar service on either the Newcastle or Anderson divisions. From Muncie, traction lines radiate to Winchester and Union City to the east; Dunkirk and Portland to the northeast; and Hartford City, Bluffton and Fort Wayne to the north. Direct connection may be had at Anderson with cars for Middletown, Alexandria, Tipton, Elwood, Marion and Wabash.

SCHOOLS

The Eastern Division of the Indiana State Normal School, located in the suburb of Normal City, is growing at a rate which promises to make it within a few years one of the largest of the State's educational institutions. The enrollment during the past summer was approximately 1,200, and the winter enrollment this year will be more than 900. The faculty, not including special summer school instructors, includes thirty members. The school here has been a division of the Indiana State Normal School only since 1916. As the Muncie National Institute, it had been in existence for a number of years, but in 1916 the grounds and buildings were purchased by the Ball Brothers of this city and presented to the State. The school is now known locally as Ball Teachers' College, although this is not incorporated in the legal name. Construction work has been started on a new science building and a new gymnasium on the Normal campus. Both of these buildings will be among the best of their character

in the State. A new athletic field and running track and several tennis courts will be established near the gymnasium.

Twelve grade school buildings and two high schools comprise the property of the school city of Muncie. The Central High School building is located at the edge of the business district and the Wilson High School is on the south side. While the full state course of study is offered the high school students, emphasis is placed on the commercial and vocational work and the high schools here are among the leaders in the state in these departments. The electrical engineering work, under the direction of Harvey M. Anthony, is undoubtedly of university character and the electrical laboratory is excelled in no high schools and in few colleges and universities in the country. The woodworking, machine, printing and drafting shops are also models of excellence.

One new grade school building is now under construction to replace the Emerson School, which had become inadequate. The eleven other grade buildings are modern and commodious.

During the past year there were 6,900 pupils in all of the city schools, of whom about 1,900 were in the high schools. The teaching corps included 268 instructors and supervisors.

One parochial school, St. Lawrence School, is maintained by the St. Lawrence Catholic parish.

GOLFING

Those visitors to the Muncie Session who have succumbed to the germ, "golfitis incurabilis," will delight in the opportunities afforded by the course of the Delaware Country Club, located about three miles east of the city. A golf tournament on Wednesday afternoon for the medicos is one of the high lights of the convention program. The Country Club course, enlarged from nine to eighteen holes a year ago, is one of the sportiest and most complete eighteen-hole courses in the state. It was designed and the construction was supervised by Arthur Lockwood of French Lick, who built the famous French Lick courses. Another attraction, and one to which Muncie has exclusive privilege, is the open state golf champion. Jack Blakeslee, the Delaware Country Club pro, won the state open title at Indianapolis last year, achieving the phenomenal record of finishing sixteen strokes above the runner-up. Blakeslee was also the only Hoosier who qualified in the national open tourney at the Skokie course, Glen-coe, Ill., in July. The club house also will be at the disposal of the guests during the tournament.

FACTORIES

Statistics from a survey taken in 1920 show that Muncie then had 53 factories, with a total of 13,540 employes, a combined weekly payroll of approximately \$356,028.75, and a factory

SEPTEMBER, 1922

THE MUNCIE SESSION

317



CHAMBER OF COMMERCE

CENTRAL INDIANA GAS CO.



DELAWARE COUNTRY CLUB

production value in 1919 of \$100,000,000. Among the larger manufactories are Ball Brothers' Glass Manufacturing Co., the largest glass fruit jar company in the world; the Muncie Products Co., a unit of the General Motors Corporation, steering devices and transmissions; Warner Gear Company, transmissions, differentials and clutches; Durant Motor Company, manufacturers of the "Durant Six" automobile; Warner Corporation, auto parts; Muncie Foundry and Machine Company, motor castings; Ontario Silver Company, silverware; Broderick Boiler Works; Gill Clay Pot Company; Glasscock Manufacturing Company, auto bodies; Hemingray Glass Company, glass insulators; Hinde Dauch Paper Company; Indiana Bridge Company; Indiana Steel and Wire Company, and Republic Iron and Steel Company.

PARKS

Muncie's four parks, two of which are large, embrace an area of 165 acres. McCulloch Park, the city's particular pride, is one of the best known and most beautiful parks in the state. A large shelter house, equipment for sports, and a small zoo are features of McCulloch Park. Heekin Park, in the southeastern part of the city, does not have the natural advantages of McCulloch Park, but is, nevertheless, a real beauty spot. Since early in the season motor tourists have been flocking to the new tourists' camping site established in Heekin Park. Many camping conveniences are provided. Rose Park, located in the southwestern section, is essentially a playground, and Federal Park, in the business district, is a place of rest and coolness for the pavement-weary and the heat sufferer.

Y. M. C. A. AND Y. W. C. A.

The Y. M. C. A. and Y. W. C. A. are civic centers. The Y. M. especially, because of its adequate accommodations, is headquarters for many educational, religious and athletic activities. While the Muncie "Y" is outstanding among the associations of the state, the boys' department has received particular renown, especially in Bible study work. For the past six years, the boys' department has led the entire United States in the number of national association Bible study diplomas received. Camp Crosley, the Y. M. C. A.'s summer camp at Lake Tippecanoe, is one of the finest boys' camps in the country and it is being taken for a model by many associations.

CLUBS AND LODGES

Visiting physicians who are members of any of the national or international civic clubs will find a "club welcome" in Muncie, for this city is represented by most of the prominent clubs. The Exchange, Rotary and Optimist Clubs meet each Thursday noon at luncheon, the Kiwanis Club on Wednesday noon, the Lions and Ad Clubs on Tuesday noon. An effort is being made to have a joint meeting of all of these

clubs on the Thursday noon of the week of the Muncie Session, at which Dr. W. A. Evans, of Chicago, a session speaker, will likely talk.

Muncie is a strong fraternal city and members of almost all fraternal orders will find a hearty welcome here. The Muncie Aerie of Eagles has a splendid home and the Elks' Lodge is just completing a large and exceptionally fine home. A Masonic Temple, which will be one of the best in this section, is in course of construction. Brother Masons, Elks, Moose, Eagles, etc., will be on every hand to welcome the "pill-dispensers" and knife and saw wielders, when they come to Muncie in September.

NEWSPAPERS

Muncie's two daily newspapers, The Muncie Star, a morning paper which is a member of The Star League of Indiana, and the Muncie Evening Press, will carry full session reports each day. The Star, which has a daily circulation of 23,000 and a Sunday circulation of 16,000, is the largest daily in eastern Indiana, and it covers the entire Eighth district. It is served by the Associated Press. The Muncie Evening Press has a circulation of about 9,000. It carries the I. N. S. telegraphic reports.

CHAMBER OF COMMERCE

The Chamber of Commerce building is one of the principal convention centers of Muncie. The chamber is one of the largest in Indiana, having a membership of about 800, but its principal claim to distinction is in its home building, which is second in size and value to that of the Indianapolis chamber, but which is generally agreed to be the best equipped and most serviceable for Chamber of Commerce purposes in the state. The Chamber's assembly hall, which will seat about 600 persons, is utilized by many conventions.

CHURCHES

Muncie is quite a church city, having thirty-eight churches, representing all prominent denominations. Three churches, the High Street M. E., the First Presbyterian and the First Baptist, are virtually in the business district of the city, and of the other large ones, the Friends Memorial, Jackson Street Christian and St. Lawrence Catholic are within a few blocks of the business district.

The Muncie Public Library, which is Carnegie endowed, has 42,374 books in circulation. In July there were 18,278 borrowers listed and books were taken out 111,786 times. The library building is at the edge of the business district of the city.

The city is protected from fire by a force of thirty-five firemen, located at three stations. The buildings and grounds of the department are valued at \$60,000 and the equipment at \$30,000. The police department has twenty-seven members, who work under the two-platoon system.

Other statistics of interest regarding Muncie include the following: Population, 36,524; miles of streets, 138.42; area, 7.15 square miles; miles of pavement, 90.61; miles of gas mains, 100; miles of public sewers, 43.05; assessed valuation of city property, \$58,188,780; miles of city car lines, 14.5.

PLACES AND TIME OF MEETINGS

The Hotel Roberts has been selected as the general headquarters of the Association and here the registration desk will be located. The first meeting of the session will be that of the Council which will be held in the grill room of the Hotel Roberts at 4:30 p. m. on Wednesday. In the evening of the same day the House of Delegates will meet in the grill room of the Hotel Roberts at seven o'clock, and following this, at eight o'clock will be the informal smoker in the ball room of the Hotel Roberts. The evening of the first day the ladies will be entertained with a theater party at the Wysor Grand Theater. The golf tournament will be held on Wednesday afternoon at the Delaware Country Club. On Thursday morning the general meeting will be held in the high school auditorium, and in the afternoon the Section on Surgery will meet at the high school auditorium, while the Section on Medicine and the Section on Ophthalmology and Otolaryngology will meet at the Hotel Roberts. In the evening the Garrett Boys' Band of Muncie will give a concert at the Hotel Roberts from 6:30 until 7:30, and at eight o'clock a public meeting will be held at the high school auditorium with Dr. W. A. Evans, of Chicago, the speaker. Following this there will be dancing at the Hotel Roberts. On Friday the House of Delegates will meet at the Chamber of Commerce at 8 a. m., and the various sections will hold meetings at 9 a. m. The general meeting will be held at the high school auditorium on Friday afternoon at 2 p. m. The Council will meet in the Hotel Roberts at the same hour.

REGISTRATION

It is important that immediately upon arriving in Muncie the members of the Association should proceed at once to the registration bureau at the Hotel Roberts and register. Registration will be by membership card, and to avoid delay and confusion members are urged to have their cards ready for inspection by the Registration Committee. Registering members are requested to indicate the number of ladies in the party so that the Committee on Entertainment may know early the number to be provided for. Badges will be furnished to the members for identification. Letters and telegrams may be sent to the Hotel Roberts in charge of the Committee on Registration.

HOTELS

The Hotel Roberts is the headquarters of the Association. Rates at this hotel are as follows: Rooms, with shower, accommodating two people, \$4.00; room, with bathtub, accommodating two people, \$5.00 and \$6.00; for each additional person in room, \$2.00. Hotel Delaware: Single room, with bath, \$2.50; double room, with bath, \$3.50; single room without bath, \$1.50 to \$1.75; double room without bath, \$2.50 to \$2.75. Hotel Kirby: Single rooms, \$1.25, \$1.50 and \$2.00. There are several smaller hotels which have very good accommodations. If you are unable to secure satisfactory accommodations at any of the above hotels, immediately get in touch with Dr. Earl S. Green of Muncie, who has charge of the reservations, and the Committee on Arrangements will see that suitable accommodations are arranged, either in one of the smaller hotels or in homes.

OFFICIAL CALL TO THE HOUSE OF DELEGATES

The next annual session of the Indiana State Medical Association will be held at Muncie, Wednesday, Thursday and Friday, September 27, 28 and 29, 1922.

The House of Delegates will be constituted as follows: Marion County, 8 delegates; Allen County, 2 delegates; Lake County, 2 delegates; St. Joseph County, 2 delegates; Vanderburg County, 2 delegates; Vigo County, 2 delegates; the other seventy-eight counties each one delegate (two more paid-up members will entitle Delaware-Blackford County to one more delegate); thirteen councilors; the ex-presidents, namely, G. F. Beasley, C. S. Bond, M. F. Porter, W. N. Wishard, J. C. Sexton, G. W. McCaskey, A. W. Brayton, J. B. Berteling, G. T. McCoy, D. C. Payton, T. C. Kennedy, W. F. Howat, J. P. Salb, G. F. Keiper, J. H. Oliver, J. R. Eastman, W. H. Stemm, C. H. McCully, David Ross; in addition to this, the President and Secretary of the Association, and the Editor of *THE JOURNAL*, all without power to vote except in case of a tie, when the President shall cast the deciding vote.

Blank credentials have been sent by the Secretary to each county society, and the properly executed credentials for the delegates should be mailed immediately to Dr. Charles N. Combs, Terre Haute, or brought to the session. No delegate will be seated unless wearing the official badge.

The House of Delegates will convene promptly at 7 p. m. Wednesday, September 27th, in the Grill Room, Roberts Hotel, and again at 8 a. m. Friday, at a meeting place to be designated later.

The order of business will be as follows:

1. Call to order by the President.
2. Roll call and seating of qualified delegates.
3. Reading of the minutes of previous meeting.
4. Report of the Secretary-Treasurer.
5. Reports of standing committees:
 - a. Administration and Medical Defense.
 - b. Publication.
 - c. Public Policy and Legislation.
 - d. Medical Education.
 - e. Hospital Standardization.
 - f. Automobile Insurance.
 - g. Scientific Work.
 - h. Necrology.
 - i. Arrangements.
6. Reading of Communications.
7. Reading of Memorials and Resolutions.
8. Unfinished business.
9. New business.
10. Adjournment.

The election of officers will be the first order of business Friday at 8 a. m. In addition to the regular officers, the terms of the following expire January 1, 1923, and their successors must be elected at this session: Delegates to the American Medical Association to succeed J. R. Eastman, Indianapolis; alternate, M. R. Combs, Terre Haute, to be elected for the ensuing two years. Delegates must have been members in good standing of this Association and of the American Medical Association for the past two years. Since the next meeting will be in San Francisco, no one should be elected who is not willing to make this trip and represent the Association. Member of the Committee on Administration and Medical Defense to succeed George R. Daniels, Marion, for the ensuing three years; also successor to the late Dr. Frank B. Wynn, Indianapolis, whose term would have expired Dec. 31, 1923. Member of the Committee on Hospital Standardization to succeed E. J. Lent, South Bend, for the ensuing five years. Delegates from counties comprising the third, sixth, ninth and twelfth districts are reminded that the terms of their councilors will expire on December 31, 1922, and new councilors should be elected to succeed the following:

Third District, Walter J. Leach, New Albany.
Sixth District, Frank J. Spilman, Connersville.

Ninth District, William R. Moffitt, Lafayette.
Twelfth District, W. D. Calvin, Fort Wayne.

It is very probable that some of these elections already have been held, but they should be reported to the House of Delegates at this session for confirmation.

CHARLES N. COMBS, Secretary.

ANNOUNCEMENTS

Following the address of Dr. W. A. Evans, on Thursday evening, there will be dancing in the ball room of the Hotel Roberts for all those who care to indulge.

Arrangements for class dinners or luncheons should be made promptly through the chairman of the Committee on Arrangements. Due care should be observed not to have any social functions interfere with the scientific meetings.

The Muncie Exchange, Rotary and Optimist Clubs meet each Thursday noon at luncheon, and the Kiwanis Club each noon on Wednesday. Members of these clubs in other cities are invited to be the guests of the Muncie clubs at the regular luncheon.

Essayists are reminded that all papers presented before the Association become the property of the Association, and, therefore, are not to be published or submitted for publication elsewhere than in THE JOURNAL of the Indiana State Medical Association.

The Garrett Boys' Band, Muncie's musical organization which has gained more than state-wide fame, will give a concert at the Hotel Roberts from 6:30 until 7:30, Thursday evening, and later, following the public meeting in the high school auditorium, there will be a dance in the ball room of the Hotel Roberts.

The members and those accompanying them are requested to register on their arrival. The bureau of information and registration is in the lobby of the Roberts Hotel. Present your membership cards when registering. Members without their cards may register after their standing has been verified by consulting the records.

The election of officers will be the first order of business at the meeting of the House of Delegates held at the Chamber of Commerce, Friday, September 29, at eight o'clock. No member of the House of Delegates is eligible to office, and delegates to the American Medical Association must have been members in good standing of the A. M. A. for the past two years.

You are requested to wear the official badge which is supplied when you register when attending or participating in the meetings. Members of the House of Delegates will have designating badges. Only those who are accredited delegates are entitled to vote at the meetings of the House of Delegates, or even to address the House of Delegates without special permission.

Register early. The booth for registration will be open Wednesday afternoon at one o'clock, and be open throughout the session. Please have your pocket cards with you in order to avoid delay in registration. If you have paid your dues to your county society secretary *only recently*, and have not yet received your membership card, present a receipt from the county secretary and you will be permitted to register. Please get your badge and wear it.

A luncheon for all officers of the Medical Reserve Corps residing in Indiana has been arranged for noon Thursday, September twenty-eighth, at the Grill Room, Roberts Hotel, Muncie. Lt. Col. A. W. Williams, M.C., U. S. A., will be present. Immediately following the luncheon there will be an informal meeting of the Medical Officers attached to the 84th Division, at which time plans for perfecting the organization will be discussed.

Not in many years have ladies been offered so much entertainment as has been provided for those who will attend the Muncie Session. Therefore, do not hesitate to bring your wife or sweetheart in the mistaken notion that she will have a stupid time. The committee in charge of the entertainment for the ladies throughout the session is composed of Mrs. I. M. Trent, Mrs. L. L. Ball, Mrs. E. S. Green, Mrs. U. G. Poland, Mrs. C. E. Miller, Mrs. C. M. Mix and Mrs. S. G. Jump.

Essayists should bear in mind that their papers as presented at the Muncie Session represent copy for THE JOURNAL, and accordingly the title and full name and address of the essayist should appear at the top of the manuscript, and the body of the manuscript should be carefully edited. Attention to the paragraphing, punctuation, capitalization and grammatical construction of sentences will go a long way toward helping the editor and printers. All manuscripts should be typewritten.

The ladies especially are invited to attend the Muncie Session. They will be entertained by a theater party on Wednesday evening; with a luncheon at the Country Club on Thursday noon, followed by a musical in the afternoon; and, on Friday, by an automobile ride, and luncheon at the country home of Dr. and Mrs. C. M. Mix. Those ladies who expect to attend the luncheons should make known the fact to the chairman of the Committee on Arrangements so that appropriate arrangements may be made.

Golfers are invited to go to Muncie early in order to enjoy the hospitality of the Delaware Country Club, which offers a new eighteen-hole course said to be one of the best in the Middle West. On Wednesday morning an opportunity will be offered of settling old scores with golfing friends, and in the afternoon there will be a tournament. Those intending to take advantage of the golfing privileges are requested to write Dr. Frank G. Jackson, 214 East Adams Street, Muncie, or to Dr. C. A. Leatherman, care General Motors Corporation, Muncie.

CONDENSED PROGRAM

Wednesday, September 27

AFTERNOON

Meeting of the Council, at 4:30 p. m., Grill Room, Roberts Hotel.

EVENING

Meeting of House of Delegates, 7 o'clock, Grill Room, Roberts Hotel.

Informal Smoker and get-together meeting, 8 o'clock, Ball Room, Roberts Hotel.

Thursday, September 28

FORENOON

General Meeting, 8:30 a. m., High School Auditorium.

No section meetings.

AFTERNOON

Meeting of Section on Surgery, 2 p. m., High School Auditorium.

Meeting of Section on Medicine, 2 p. m., Ball Room, Roberts Hotel.

Meeting of Section on Ophthalmology and Otolaryngology, 2 p. m., Grill Room, Roberts Hotel.

EVENING

Public Meeting, 8 p. m., High School Auditorium. Musical program and address by Dr. W. A. Evans, of Chicago. Subject, "Sickness in Winter Time."

Friday, September 29

FORENOON

Meeting of House of Delegates at 8 a. m., Chamber of Commerce.

Meeting of Section on Surgery, 9 a. m., High School Auditorium. Election of Section officers.

Meeting of Section on Medicine, 9 a. m., Ball Room, Roberts Hotel. Election of Section officers.

Meeting of Section on Ophthalmology and Otolaryngology, 9 a. m., Grill Room, Roberts Hotel. Election of Section officers.

AFTERNOON

Meeting of Council, 2 p. m., Grill Room, Roberts Hotel.

General meeting, 2 p. m., High School Auditorium.

OFFICIAL PROGRAM OF THE ANNUAL SESSION OF THE INDIANA STATE MEDICAL ASSOCIATION

TO BE HELD AT MUNCIE,
SEPTEMBER 27, 28, 29, 1922.

HOUSE OF DELEGATES

First meeting, Grill Room, Roberts Hotel, Wednesday evening, September 27, at 7 o'clock.

Second meeting, Chamber of Commerce, Friday morning, September 29, at 8 o'clock.

COUNCIL

First meeting, Grill Room, Roberts Hotel, Wednesday afternoon, September 27, at 4:30 o'clock.

Second meeting, Grill Room, Roberts Hotel, Friday afternoon, September 29, at 2 o'clock.

Additional meetings at the call of the President of the Council.

GENERAL MEETINGS

(HIGH SCHOOL AUDITORIUM)

Thursday, September 28, 8:30 a. m.

Friday, September 29, 2 p. m.

PUBLIC MEETING

(HIGH SCHOOL AUDITORIUM)

Thursday, September 28, 8 p. m.

SECTION ON SURGERY

(HIGH SCHOOL AUDITORIUM)

Thursday, September 28, 2 p. m.

Friday, September 29, 9 a. m.

SECTION ON MEDICINE

(BALL ROOM, ROBERTS HOTEL)

Thursday, September 28, 2 p. m.

Friday, September 29, 9 a. m.

SECTION ON OPHTHALMOLOGY AND OTOLARYNGOLOGY

(GRILL ROOM, ROBERTS HOTEL)

Thursday, September 28, 2 p. m.

Friday, September 29, 9 a. m.

COMMERCIAL EXHIBITS

(HOTEL ROBERTS)

Wednesday noon to Friday night.

REGISTRATION

(LOBBY—HOTEL ROBERTS)

Wednesday afternoon.

Thursday and Friday.

ENTERTAINMENT

Wednesday, September 27, 8 p. m., smoker and get-together meeting Ball Room, Roberts Hotel.

Wednesday morning, September 27, open golf; and in afternoon golf tournament, Delaware Country Club.

Wednesday evening, September 27, moving pictures and vaudeville at the Wysor Grand Theatre for the ladies.

Thursday, September 28, 12 m., luncheon for all officers of the Medical Reserve Corps residing in Indiana; Grill Room, Roberts Hotel. Lt. Col. A. W. Williams, M.C., U. S. A., speaker.

Thursday, September 28, following public meeting, dancing, Roberts Hotel.

Thursday noon, September 28, luncheon for the ladies at the Delaware Country Club, followed by a musical in the afternoon.

Friday, September 29, 10 a. m., automobile ride for the ladies, visiting Ball Brothers Fruit Jar Company, General Motors Corporation, parks, Indiana State Normal School, Durant Motors, etc. Twelve to 1:00 p. m., luncheon at "Wild Banks" Farm, the country home of Dr. and Mrs. C. M. Mix.

SCIENTIFIC PROGRAM

GENERAL MEETINGS

(HIGH SCHOOL AUDITORIUM)

Thursday, 8:30 A. M.

Organization.

Address of Welcome.

Address of President, "The Status of the Profession in Indiana", William R. Davidson, Evansville.

SYMPOSIUM: ENDOCRINOLOGY.

1. GEORGE W. McCASKEY, Fort Wayne.

Subject: The Medical Phase of Endocrinology.

Abstract.—Outline of principles of endocrinology. Organs concerned. Active bio-chemical bodies produced and a summary of their physiological and pathological effects. Type of cases in which a clinical study of endocrine function is most valuable. A few cases illustrating the diagnostic value of these methods. Summary of the present status of endocrinology. The various diseases in which perversions of endocrine function play a dominant or at least an important role.

Discussants: Edgar F. Kiser, Indianapolis; L. P. Drayer, Fort Wayne.

2. C. C. BRITLER, Newcastle.

Subject: The Neurological Phase of Endocrinology.

Abstract.—The ductless glands in their relation to the sympathetic nervous system and the consequent effect of their secretions upon the vegetative nervous system and resulting nervous manifestations on the individual. The products of the glands are discussed individually and collectively. The nervous symptoms following infectious diseases are partly explained by the unbalancing effect of the toxins of the infections upon endocrine glands.

After a careful review of the literature and personal interviews with authorities and my own limited observations on the subject the conclusion is reached that the glands of internal secretion probably have a greater effect upon personality both normal and abnormal than we have ever supposed, and that the field for scientific investigation is unlimited, as the most we have is theories and treatment almost entirely empirical.

Discussants: Albert E. Sterne, Indianapolis; Charles P. Emerson, Indianapolis.

3. W. D. GATCH, Indianapolis.

Subject: The Surgical Phase of Endocrinology.

(No abstract.)

Discussants: Tom Jones, Anderson; H. H. Martin, Laporte.

Friday, 2 P. M.

SYMPOSIUM: MENINGITIS.

1. CHARLES F. NEU, Indianapolis.

Subject: Meningitis, Differential Diagnosis.

Abstract.—The diagnosis of meningitis primarily is determined by the consideration—

(1) of symptoms depending upon disease processes taking place on the surface of the brain and their manner of development.

(2) of general symptoms due to systemic involvement by the infection or its toxins.

(3) of the history of its probable cause.

(4) of changes to be found in the character and composition of the cerebro-spinal fluid.

Various systemic diseases as well as focal lesions of the central nervous system may be accompanied by symptoms very similar in type and character to those met with in the various forms of meningitis. Typhoid fever, pneumonia, uremia, delirious states resulting from toxins arising within the body or introduced into it from without, vascular lesions, brain tumors, acute-psycho-neurotic states and many other conditions at times develop a symptomatology closely resembling that of meningitis.

In many of these conditions the diagnosis is rendered more difficult because of the fact that meningitis may arise as a complication of the primary disease.

The information to be gathered from examination of the cerebro-spinal fluid is in most cases the most reliable means of making a definite diagnosis. But even this at times may lead one astray because in the early stages of some forms of meningitis, particularly when secondary to some focal infection, one may find very little change in the character or composition of the cerebro-spinal fluid.

Since lumbar puncture, if properly carried out, rarely does any harm, and is practically devoid of any danger, this procedure is justified in every case of doubt presenting suspicious symptomatology.

2. MILES F. PORTER, JR., Fort Wayne.

Subject: Meningitis, Treatment.

Abstract.—The treatment of meningitis depends naturally upon the etiological factor. In the more common form (that produced by the meningococcus) treatment means Flexner's serum. Attempt should be made to get all the serum necessary to produce desired effect, introduced within thirty-six hours of onset or at least diagnosis. In preparation large quantities of spinal fluid should be withdrawn, both to avoid risk of administration of serum and for therapeutic effect. Intravenous use of serum in conjunction with intraspinal highly advisable. Large doses of serum not harmful but prolonged use of it may be productive of continued fever and neurological symptoms. Recrudescence should be rare.

Meningitis from other causes not rare—and not hopeless—original focus of infection should be removed or drained and biological therapy attempted. Frequent drainage of fluid helpful. Authentic cure not rare—illustrative cases.

3. HARRY BOYD-SNEE, South Bend.

Subject: Otitic Meningitis.

Abstract.—The paper discusses suppurative meningitis of otitic origin and deals particularly with the etiological factors which are operative in determining that complication as it has been observed to develop in connection with insults to the integrity of the temporal bone.

Discussants: Robert M. Moore, Indianapolis; D. O. Kearby, Indianapolis; Earl O. Daniels, Marion; George V. Cring, Portland.

SECTION ON MEDICINE

(BALL ROOM, ROBERTS HOTEL)

Thursday, 2 P. M.

1. JOHN H. WARVEL, Indianapolis.

Subject: Some Observations on Cases Showing a Disturbance of Carbohydrate Metabolism.

Abstract.—1. The usual carbohydrate intolerance as noted in the diabetic patient.

2. The faulty carbohydrate metabolism noted in the thyroid, pituitary and other endocrine disturbances.

3. The appearance of hyperglycemia before the presence of glycosuria; in patients who later develop true diabetes.

Point number three will be the one on which I wish to place the most emphasis.

Discussants: B. M. Edlavitch, Fort Wayne; C. R. Strickland, Indianapolis.

2. O. G. PFAFF, Indianapolis.

Subject: Congenital Pyloric Stenosis.

Abstract.—Congenital pyloric stenosis occurs with considerable frequency. Many cases not diagnosed inevitably go on to fatal termination. Recent surgical intervention shows almost uniformly ideal results. The diagnosis is easy and the operation both simple and safe, and should generally be performed under novocaine anesthesia.

Discussants: James C. Carter, Indianapolis; W. D. Gatch, Indianapolis.

3. ALFRED HENRY, Indianapolis.

Subject: The Treatment of Pulmonary Tuberculosis.

Abstract.—The treatment for pulmonary tuberculosis is what it has always been, *i.e.*, bed rest, fresh air, nourishing food, peace of mind, and medical attention. The greatest of these is bed rest. The medical profession is making strides in helping people with this disease get well by insisting on more effort on the part of the patient.

Tuberculin therapy is used in some cases but seems to be overworked. The idea is not to condemn tuberculin therapy but to advise more precaution in the selection of suitable cases for its use. The typical case is one running no temperature and getting nowhere in the cure process. He might be called the semi-invalid.

The greatest help that has come to the medical profession in the treatment of advanced pulmonary tuberculosis is artificial pneumothorax. This consists of partially or completely collapsing the involved lung. This method forces rest, which is the greatest curative agent in the tuberculosis field.

Graduated exercise is just as necessary in the convalescing stage as rest is in the active stage in the cure-taking process.

Discussants: Gardner C. Johnson, Evansville; Charles R. Bird, Greensburg.

4. J. E. LZADDER, Bloomington.

Subject: The Therapy of Syphilis.

Abstract.—Syphilis is responsible for one-third of pathology, is the chief factor in organic diseases of the nervous system, and is responsible for 12 percent of the 200,000 cases of insanity in the United States. Ten percent of the male population of the United States are infected, 10 percent of dermatoses are specific.

The most valuable of laboratory methods are the testing of blood for complement fixation, examination of spinal fluid and demonstration of the spirochetes in the lesions.

In treating syphilis a risk accompanies the conjoined administration of neoarsphenamine and mercury. For intensive treatment these drugs should be given separately.

The drug intrimine should be given in doses of 3 cc. intramuscularly. This drug is a sulphur product—a reducing agent—which prevents arsenic and mercury from exercising a toxic effect on nerve tissue.

In neuro-syphilis the intraspinal treatments are given as the intravenous administration has not proven satisfactory.

In conclusion neosalvarsan therapy is necessary since it controls infectivity and contagion. It yields quick results. Mercury is essential as an aid to a permanent cure. Overtreatment is preferred to lack of treatment. Mercury given not by the month but by the year, and neoarsphenamine not by the dose but by the half-dozen of doses, must be given before any hope of a cure can be effected.

Discussants: C. L. Bock, Muncie; Frank G. McCarthy, Terre Haute.

Friday, 9 A. M.

1. JAMES WYNN, Indianapolis.

Subject: Sensitivity to Epidermal and Pollen Proteins; Diagnosis and Treatment.

Abstract.—The various clinical pictures of sensitivity to pollens and epidermal proteins have long been recognized, as evidenced by the work of Boston, Blackley, Curtis, Dunbar, etc. To Meltzer belongs the credit of pointing out that certain types of asthma and paroxysmal rhinorrhea are anaphylactic phenomena. It remained for Walker to put the treatment of both asthma and hay fever of protein origin on a sound practical basis.

The state of sensitiveness to any protein means the presence of fixed cellular antibodies; on the other hand, the state of immunity for a particular antigen means the presence of circulating antibodies for that specific antigen.

A state of sensitiveness may manifest itself by any one or more of several symptoms, sneezing attacks and lacrimation, asthmatic seizures, cutaneous manifestations, etc. Each syndrome has rather distinctive features. Analysis of certain facts in the history will often suggest the offending protein. To clinch the etiological diagnosis fixed cellular antibodies to the suspected protein should be demonstrated by the skin test.

The ideal treatment of these conditions is of course the removal of the cause—the withdrawal of patient from protein (as in the vacation treatment of hay fever) or protein from patient (as in the feather and hair cases). In many instances this is impractical, and the patient must be desensitized. This is accomplished by a course of injections with the specific antigen. (Preparation of the antigen and its administration are fully discussed.)

Though the specific treatment of these protein cases is at present hardly within the realm of the general practitioner, he should be familiar enough with clinical features to recognize and classify these cases with considerable accuracy as they occur in his practice. The more complete differential diagnosis and desensitization must be left to those especially equipped for this work.

Discussants: C. G. Beall, Fort Wayne; William D. Asbury, Terre Haute.

2. S. C. WATERS, Middletown.

Subject: Epidemic Jaundice.

Abstract.—Differentiation of various forms of jaundice. Criticism of assumption that the leptospiroicterohemorrhagica is the cause. Extent and prevalence. Influenzal character of epidemic. History, seasonal and age incidence. Summary of symptomatology of forty cases clinically observed. Treatment and conclusions.

Discussants: W. M. Stout, Newcastle; Will P. Shimer, Indianapolis.

3. DR. CHARLES LOTIS MIX, Chicago.

Medical Address.

4. W. A. FANKNER, Marion.

Subject: Sequelle of Lethargic Encephalitis.

Abstract.—Epidemic Encephalitis—Some After Effects: 1. Anatomical considerations. 2. Personality before and after. 3. Report on cases mentioned in paper presented at last meeting.

Discussants: Wier Miley, Anderson; C. A. Sellers, Hartford City.

SECTION ON SURGERY

(HIGH SCHOOL AUDITORIUM)

Thursday, 2 P. M.

1. CHARLES H. FRAZIER, Philadelphia.

Surgical Address, "The Trend of Neurological Surgery."

2. J. RILUS EASTMAN, Indianapolis.

Subject: A Safe Method for Drainage of Intra-Abdominal Abscesses.

Abstract.—Employment of extra peritoneal drainage tube for retro-cecal abscesses; use of large cigarette drain for trans-abdominal drainage of pelvic abscess without puncture of abscess at the time of opening of the abdomen, dependence being placed upon the pressure of the drain, suction and chemotaxis to induce rupture of the abscess after a walled off canal has been formed; other applications of this principle.

Discussants: Miles F. Porter, Sr., Fort Wayne; Wm. J. Moore, Muncie.

3. A. P. ROOPE, Columbus.

Subject: Thyroid Disease.

Abstract.—Goitre is an extremely prevalent disease and is much neglected in its early and inactive states.

Early and borderline cases of hyperthyroidism often present great difficulties of diagnosis. Not all cases are surgical. X-ray has its place in treatment. The nose, throat and mouth should have careful attention in every case.

Treatment of goitre of the adolescent is usually mental, moral and physical hygiene. Sooner or later adenomatous goitre is practically always toxic. The length of time goitre has existed and its size bear no relation to the violence of symptoms. Young children with enlarged thyroids should always receive medical care. Prevention is a duty this generation owes to the next.

Discussants: J. Y. Welborn, Evansville; F. H. Jett, Terre Haute.

4. FRANK W. FOXWORTHY, Indianapolis.

Subject: Diagnosis of Duodenal Ulcer.

Abstract.—Operative surgery and autopsies have shown a large percentage of undiagnosed duodenal ulcers. On account of the hordes of chiropractors and other irregulars endeavoring to cause dissension among the members of the regular medical fraternity, any procedure that promotes harmony between the internists and surgeons is to be desired. As the surgeons and internists at the joint section meeting at the St. Louis session of the American Medical Association agreed on a rational method of the treatment of duodenal ulcer, is it not possible for them to agree on a standard method of diagnosis? Such a method, with a new scheme for examination, is offered for consideration.

Discussants: W. H. Foreman, Indianapolis; H. O. Bruggemann, Fort Wayne.

5. F. C. WALKER, Indianapolis.

Subject: Reconstruction of Perineal Genito-Urinary Childbirth Injuries.

Abstract.—The anatomy and functions of the perineal parts and the closely associated genito-urinary structures have not been as clearly visualized, both in the normal and the abnormal, as they should be to act as a basis for reconstruction. This has led to errors in prevention, diagnosis and treatment. Pelvic supporting structures best understood when considered in three strata. It is pretty generally understood now that some of the standard former operations for perineal repair were merely vaginal resections and failed to get the supporting tissues.

Associated secondary lesions as misplacements, de-census, cystocele and rectocele are very common. Cystocele and rectocele are true herniae. Any reconstruction surgical procedure must take into consideration any and all of these conditions and their various combinations. A great many such results could be prevented by better obstetrics. Age; number of children; concurrent disease in other organs; character and degree of the local secondary resulting derangement and the social conditions must be carefully appraised in outlining treatment.

Hysterectomy is advisable in women near or past the menopause, or in younger women with a distinct uterine or cervical disease, followed by complete

adjustment of the remaining structures. The primary object is to cure the patient of the cause of her suffering and annoyance. Too many return complaining of no relief or incomplete relief because all factors have not been duly considered. Vaginal or abdominal route may be elected, depending on indications and conditions. If hysterectomy not best, some reliable form of suspension should be used. The bladder in any method should be dissected from its cervical and vaginal attachments and anchored high by using the perivesical fascia and a well supported vaginal stump.

Deep perineal recto-vaginal septum dissection is very essential. Rectum should be pushed upward and backward and fixed with a vaginal suture. The levator muscle and fascia must be exposed and securely united as these are the real supporting structures. Method of deep suture insertion simplifies operative technic. Smallest amount of foreign material should be used as is consistent with good co-aprtion without constriction.

No small part of the success of the operation depends upon the post-operative care of a good nurse. This work depends for results on the minutest care to detail. Lack of this may defeat the purpose of a well executed operation.

Discussants: A. A. Rang, Washington; J. H. Weinstein, Terre Haute.

6. E. E. PADGETT, Indianapolis.

Subject: Tuberculosis of the Female Generative Organs.

Abstract.—This disease is by no means rare. In fact it is more common than believed. Often it is overlooked due to the removal of tubes and attributing the condition to some other kind of infection in the absence of further examination.

It is more common in the tubes but may occur in any of the pelvic organs. It may be either primary or secondary to areas of infection elsewhere in the body, most often believed to be the lung. Although it is believed to be more often secondary, often the primary infection is not located. It is a disease of the child-bearing period but no age is exempt.

Its progress is slow in most forms and its symptoms are those of a chronic pelvic inflammation. However, it is accompanied by a temperature in the afternoon which can practically always be found if searched for long enough and which is a vital point in the diagnosis.

Its treatment is operative in practically all cases, and the time and nature of the operation is dependent on the general condition of the patient. (Lantern slides.)

Discussants: Carl Habich, Indianapolis; G. B. Jacksou, Indianapolis.

Friday, 9 A. M.

1. A. M. MENDENHALL, Indianapolis.

Subject: Occiput Posterior Positions; Early Diagnosis and Various Methods of Treatment.

Abstract.—Obstetrical reasons why difficult labor. Percentage of occiput posteriors. Early diagnosis important. Diagnosis very often not made even when forceps are being applied. No excuse for applying forceps without a diagnosis as to position. Injuries resulting from occiput posterior delivery.

Treatment:—1. Plenty of time. 2. Postural treatment. 3. Manipulation (explanation in detail). 4. Rotation with hand in vagina. 5. DeLee's treatment. 6. Scanzoni maneuver. 7. Forceps. 8. Version.

Conclusions:—The first three are quite safe. The other methods require considerable experience and skill.

Discussants: Fred Clapp, South Bend; Clay A. Ball, Muncie.

2. H. A. DUEMLING, Fort Wayne.

Subject: Technique of Cholecystectomy.

Abstract.—The course of the cystic artery in relation to the common duct and the gall bladder.

The relation of the cystic duct to the common duct.

Exhibit will be made of a number of clay models and a number of specimens covering the various phases of gall bladder disease.

Discussants: Hugo O. Pantzer, Indianapolis; J. C. Sexton, Rushville.

3. SIMON J. YOUNG, Gary.

Subject: Some Observations on Gall Bladder Surgery.

Abstract.—This paper is designed to bring under discussion some of the problems which confront the surgeon in a case involving operation upon the gall bladder—this in the belief that this field is fertile still for discussion—endeavoring to stimulate thoughtful consideration of those factors of safety and sanity which contribute to better end-results.

First, it deals with the functions of the gall bladder, concerning which there is no little diversity of opinion. Naturally, one's views upon function influence his decision in the choice of an operation, as well as in the treatment of complications. The relationships existing between the gall bladder and other viscera have to be considered, especially with reference to routes of infection, from one to the other. This leads to a discussion of complications and their causes. Pertinent to the subject also are such questions as the necessity for early operation; the indications for and methods of drainage; safety factors in technic; and recurrences after operation. In this, as in other fields of surgery, it is desirable to have a clear conception of inter-related pathology; in no other way may an operation be planned which offers the maximum in service to the patient.

Discussants: E. S. Jones, Hammond; G. G. Eckhart, Marion.

4. G. D. MARSHALL, Kokomo.

Subject: Diseases and Injury to the Hip Joint.

Abstract.—Many of the conditions affecting the hip joint will be mentioned only in connection with differential diagnosis. Special emphasis will be made of the utility of the Bradford abduction splint, in the treatment of both disease and injury of the joint. The need of weight bearing braces in the later treatment of congenital dislocation. Diseases peculiar to the hip joint (Legg-Calve disease, or osteo chondritis deformans juvenalis). Snapping hip joint. Dislocation due to paralysis, poliomyelitis. Fracture of the neck of femur. Traumatic arthritis.

Discussants: C. C. Terry, South Bend; M. S. Davis, Marion.

5. M. A. AUSTIN, Anderson.

Subject: Repair of Three Uncommon Fracture Cases, with the Use of an Original Crucifixion Splint in Fracture of the Surgical Neck of the Humerus.

Abstract.—A report of three recent fracture cases with unusually difficult problems to meet. (1) A multiple fracture case of left hip, left leg, left forearm and right wrist. Perfect result in forearm and leg, good functional result in hip and requiring removal of right carpal scaphoid. (2) Fracture of upper third of hip, in which ordinary methods of immobilization failed and five reductions were required, and perfect result obtained after open operation and immobilization in an unusual manner. (3) Fracture of the surgical neck of the humerus of the type which Scudder states is impossible to immobilize and retain without open operation. Perfect result obtained by the use of an original "Crucifixion" type of extension splint.

Discussants: J. E. Hiatt, Richmond; E. H. Clauser, Muncie.

6. H. R. ALLEN, Indianapolis.

Subject: The Surgical Engineer.

Abstract.—There now exists an organization of surgical engineers with headquarters and laboratories and a firm determination to investigate physical principles and devices and uses of energy employed in different branches of surgery. On its consulting staff are the ablest mechanical engineers and human anatomists this country affords. Upon their recommendation various items in general surgical usage will be investigated as to their soundness and appropriateness. Correct and appropriate ways and means will be recommended in place of what is known to be inappropriate and unsound. In its work this association is free to enter the field of chemistry or bone and muscle dynamics or any other field under the broad subject of physics. In my paper a few examples of surgical and anatomical shortcomings will be presented.

Membership in the Surgical Engineers' Association is open to all truth loving men, capable of discerning and following facts wherever facts may lead them. There will be no medical or other kind of politics in this association. There are no dues nor membership fees except conscientious mental efforts that will contribute towards putting surgeons and surgery on a sound mechanical basis for the first time in the history of surgery.

Discussants: D. S. Wiggins, Newcastle; M. E. Klingler, Garrett.

SECTION ON OPHTHALMOLOGY AND OTOLARYNGOLOGY

(GRILL ROOM, ROBERTS HOTEL)

Thursday, 2 P. M.

1. CARL H. McCASKEY, Indianapolis.

Chairman's Address.

2. ALBERT E. BULSON, Jr., Fort Wayne.

Subject: Cycloplegies in Refraction Work.

Abstract.—Cycloplegies necessary for satisfactory refraction work.

Atropin, hyoscine and homatropin in the order named considered most efficient, though homatropin generally employed in adults and supplemented by stronger cycloplegies when indicated.

Complete paralysis of accommodation is a necessary condition for estimating the static refraction.

Method of using cycloplegies and reasons for failure to secure satisfactory results.

Idiosyncrasies.

Retinoscopy absolutely necessary in refraction work, but retinoscopy practically useless without cycloplegia.

Examples of differences in refraction as determined with and without cycloplegies as also with cycloplegies of different strengths.

Mild and strong cycloplegies.

Rules for prescribing glasses after determining the static refraction.

Discussant: Thomas C. Hood, Indianapolis.

3. WILLIAM B. CHAMBERLIN, Cleveland, Ohio.

Address: Endonasal Operations on the Lachrymal Sac.

4. F. S. CUTHEBERT, Kokomo.

Subject: System and Thoroughness in Eye Examination and Treatment.

Abstract.—Essentials are a capable diagnostician and a faithful observance of routine. First examination should establish an accurate diagnosis in most all cases. Great demands on examiner's eyesight. Snap diagnosis frequently fails. Searching personal history. Steps in routine examination. Value of retinoscopy. Cycloplegies. Method of treating posterior synechia. Thoroughness in office treatments versus "drops" used in the eyes at home.

Discussant: W. A. Hollis, Hartford City.

Friday, 9 A. M.

1. W. F. HUGHES, Indianapolis.

Subject: Cataract Extraction and its Complications.

Abstract.—The extraction of cataract has been, and is, probably the most frequently discussed subject in ophthalmology. The ideal procedure has not yet been fully developed. The prognosis should be carefully guarded.

A cataract extraction by a skillful, experienced operator, under the most favorable conditions, may come to failure, often when least expected. The operation should be done only under the most favorable conditions of the patient and surroundings.

The mode of procedure should be thoughtfully selected for each individual case with a view of avoiding complication both during the operation and the subsequent healing process. Complications should be met promptly as they arise.

Secondary cataract operations should be done with the same care as the primary. Some risk is involved.

Discussant: Frank A. Morrison, Indianapolis.

2. W. S. TOMLIN and D. S. ADAMS, Indianapolis.

Subject: Phases of Chronic Pharyngeal Infection.

Abstract.—Focus of attention on operative terminology has led the public and also the profession to think in terms of tonsillectomy and adenectomy as being the goal of throat procedures. While these must be prominent in attempts to clear pharyngeal spaces of infection, they do not comprise all that is necessary in many cases. Infection bearing lymphoid tissue in the plica, around the eustachian tubes and more remote recesses, may be and are overlooked in some cases to the detriment of patients and the discredit of the work and the operator. Deep chronic abscesses extending to the digastric fossa in patients who say that they "have not had a sore throat in months or years" may be overlooked and left after a perfect tonsillectomy and an adenectomy which seems to sweep the pharyngeal vault quite clear by usual standards may leave adhesions and pathologic areas in foruices only possible to be reached with changed positions and instruments under direct guidance of the educated finger or vision.

Case reports.

Discussant: K. T. Brown, Muncie.

3. G. W. SPOHN, Elkhart.

Subject: Eye Drainage.

Abstract.—Definition. Descriptive anatomy and physiology. The need of a drainage system as well as a system of sewerage. Occlusion of the punctum, the lachrymal or nasal duct. Etiology of occlusions. The more common pathological conditions of the drainage system. The constant passing of probes for dilation on a par with Politzerization of the tympanum of the ear.

Prognosis dependent upon the reserve, the vitality or the reconstructive power of the patient.

Treatments.

Conclusions.

Discussant: C. Norman Howard, Warsaw.

REPORT OF THE SECRETARY

House of Delegates, Indiana State Medical Association:

Gentlemen: I beg to report that so far this calendar year there have been 2,588 paid-up memberships in the Association, an increase of seventeen over the corresponding time for last year. In another column of this issue of THE JOURNAL you will note that this increase is not distributed evenly over all the county districts, some districts being much behind last year's quota and some being in excess of last year.

Our delegate to the St. Louis session of the American Medical Association, Dr. George F. Keiper, reports that he presented the name of Dr. G. W. H. Kemper of Muncie to the House of Delegates of

the American Medical Association, and that since Dr. Kemper had complied with all requirements, he was elected to Affiliate Fellowship in the American Medical Association, an honor but rarely conferred upon our members.

Respectfully submitted,

CHARLES N. COMBS, Secretary.

REPORT OF THE COMMITTEE ON ADMINISTRATION AND MEDICAL DEFENSE, INCLUDING REPORT OF THE TREASURER

House of Delegates, Indiana State Medical Association:

Gentlemen: You will remember that in last year's report mention was made of the fact that all cases acted upon by the Medical Defense Committee are given a serial number so that reference may be made to individual cases without mentioning any names.

One year ago in our report to the House of Delegates, there were seventeen cases pending in the hands of the Committee. Following is the detailed progress of these cases during the past twelve months:

No. 67	Still pending.
No. 68	The appellate court reversed the decision of the lower court so that it is now in favor of the defendant. However, the case will go before the Supreme Court for final decision.
No. 73	The Supreme Court affirmed judgment of \$500.00 against defendant. Cost to Association, \$88.50.
No. 83	Still pending.
No. 85	Never came to trial.
No. 86	Dismissed on account of lack of evidence.
No. 90	Verdict for defendant.
No. 92	Still pending.
No. 94	Settled out of court. No expense.
No. 96	Still pending.
No. 98	Never came to trial. No expense.
No. 99	Thrown out of court. No expense.
No. 100	Still pending.
No. 102	Thrown out of court. No expense.
No. 103	Verdict for defendant.
No. 105	Verdict for defendant. Expense \$265.00.
No. 106	Still pending.

Since September 1, 1921, there have been referred to the Committee eight new cases, and the status of these cases is as follows:

No. 107	Pending.
No. 108	Pending.
No. 109	Member died March, 1922. Expense \$50.00.
No. 110	Pending.
No. 111	Pending.
No. 112	Pending.
No. 113	Not entitled to defense. No expense.
No. 114	Pending.

This leaves fourteen cases in the hands of the Committee, Nos. 67, 68, 83, 92, 96, 100, 106, 107, 108, 109, 111, 112 and 114.

In the financial report, you will note that the expense of the Committee so far this year has been only \$315.00. For the time being at any rate, the Committee stands justified in continuing its present policy as to attorneys. A few years ago our attorney's salary alone was \$1,500.00 a year in addition to other expense. Indiana is remarkably free from malpractice suits. Contrasting with our \$315.00 is the statement that in Iowa last year the Association spent \$5,000.00 for attorneys' fees alone.

The remaining members of the Committee wish to pay their sorrowful tribute to the memory of one whose name is signed below. Dr. Frank B. Wynn has been a member of this Committee since 1917, and a very large share of the success in the administration of the affairs of this Committee is due to his earnest and untiring efforts.

FINANCIAL REPORT

Medical Defense Fund.

Receipts:

Balance on hand at last published report,	
January 1, 1922.....	\$ 587.91
Medical Defense Apportionment, 2,588 members at 75 cents each.....	1,941.00
Liberty Bonds.....	5,000.00
Total	\$7,528.91

Disbursements:

Case No. 105.....	\$265.00
Case No. 109.....	50.00
Total	315.00

Balance on hand Sept. 1, 1922—Cash.... \$2,213.91
Liberty Bonds..... 5,000.00

The report of the Treasurer is as follows:

Receipts:

Balance on hand last printed report,	
January 1, 1922.....	\$ 9,016.86
Membership dues (2,588 members).....	10,352.00
Sale of furniture.....	155.00
Total	\$19,523.86

Expenditures:

THE JOURNAL, \$2 per member.	\$5,176.00
Medical Defense Fund, 75¢ per member.....	1,941.00
Secretary's stenographer.....	511.50
Postage and Incidentals.....	72.96
Printing	191.77
Typewriter	102.50
Councilors' expenses.....	66.68
Legislative Committee.....	519.75
Bonds for Treasurer.....	56.00
Balance due Claypool Hotel....	15.00
Storage of furniture.....	36.94
Total	\$690.10

Balance on hand Sept. 1, 1922..... \$10,833.76
Respectfully submitted,

CHARLES N. COMBS, Treasurer.
E. M. SHANKLIN, Chairman.
GEORGE R. DANIELS.
FRANK B. WYNN*.

REPORT OF THE COMMITTEE ON MEDICAL EDUCATION

House of Delegates, Indiana State Medical Association:

Gentlemen:

1. *Medical Education in America.* Perhaps the most outstanding change in Medical Education in the past year is the emphasis placed on Hygiene and Preventive Medicine. Courses three times the length of former courses have been arranged in most schools while a few schools are offering courses for those having the M.D. degree and requiring two to three years for their completion.

It seems probable that the low ebb in medical school enrollments has been reached and passed. Throughout the country there is an increase in freshman medical enrollments.

2. These general tendencies are noted in our own medical school. The course in Hygiene has been increased to about one hundred hours. The freshman medical class last year was the largest since the adoption of the two-year collegiate work for entrance. There were 112 in last year's freshman class. It has been necessary this year to increase the scholarship requirement in premedical work with the object of preventing matriculation of the poor or lazy student instead of carrying him for a year and having to fail him at the end of a year.

*Deceased.

The progress of the Riley Memorial Hospital and the need of a Psychiatric Hospital are outstanding features of Medical Education of Indiana.

Respectfully submitted,

BURTON D. MYERS, Chairman.

REPORT OF THE COMMITTEE ON HOSPITAL STANDARDIZATION

House of Delegates, Indiana State Medical Association:

Gentlemen: No systematic hospital survey of the State has been made this year. It was not deemed advisable on account of the expense in money and time. In addition the various hospitals are known to be in fair to good condition; some are in excellent physical and scientific standing.

St. Elizabeth's Hospital (Lafayette) has been admitted to the approved list for interne training by the A. M. A. Committee; several other Indiana Hospitals will be recommended for similar accredited standing during the next year. Improvement is noted all along the line.

Respectfully submitted,

ALBERT E. STERNE, M.D., Chairman.

ABSTRACT OF REPORT OF COMMITTEE ON AUTOMOBILE INSURANCE

House of Delegates, Indiana State Medical Association:

Gentlemen: Work of the Committee, based on the fact that the doctor should be a preferred risk for automobile insurance. Usual rates on automobile insurance prohibitive. The Committee seeks to obtain insurance for members of the Medical Association, the rates proportionate to the moral hazard and the actual risk.

Three procedures considered, to-wit: One, insurance with standard stock companies. This was unsuccessful as no concessions would be made by stock companies on account of dis-organization of their agency force. Two, the organization of a stock company or a reciprocal association within and for the Medical Association. This was found to be impracticable by reason of lack of time and the legal requirements covering the situation. Three, the execution of a contract between the State Medical Association and some reciprocal organization for the writing of individual policies at just and proper rates. Legal opinion was necessary to show the rights and liabilities of policyholders in a reciprocal organization. Firm of Emison & Hoover employed to render legal opinion covering the entire subject of automobile insurance.

Abstract of Attorneys' Opinion: Review of entire subject of Inter-Association Insurance. Legal requirements on Attorney-in-Fact. Attorney-in-Fact is sole negotiator. He represents the policyholders in his relation with other policyholders. His powers limited by articles of agreement. Method of organization of a reciprocal concern. The expenses of the office maintained by the Attorney-in-Fact is the sole expense with such insurance, other than losses. Liability of policyholder: This is governed by the law of Indiana as interpreted by the Attorney General on September 1st, 1921, as not exceeding that which is specified in the original association agreement. It is a several liability which can be limited as the subscribers see fit. Legal disadvantages: This consists in the fact that legal services can be had on any subscriber if the Attorney refuses to appear in defending the suit, but the subscriber has recourse against the Attorney. In the opinion of the legal authority, this is only a theoretical disadvantage as the Attorney-in-Fact would undoubtedly appear. Discussion of mutual insurance which operates under the law of 1915. Permission by statute to reinsure.

Requirement that the cash premium must be expressed in the policy. Certain requirements and limitations placed upon the corporation by law. Legal requirements as to admitted assets. Rights and liabilities of the insured: Provisions of statute for cancellation or forfeiture of policy. Payment of premium is a question of contract. Mutual or reciprocal insurance a question of contract. The insured is liable for such assessment as may result from liability or accidents which occur during the life of his policy.

Offer of the Standard Auto Insurance Association found to be the lowest and best offer. Submitted in full in the report. Standard Auto Insurance Association a reciprocal concern under laws of Indiana, with firm of Bainum-Phillippe Company as Attorney-in-Fact with central office at Vincennes, Indiana. Sworn statement from the Bainum-Philippe Company showing the stockholders of that concern. Investigation by Committee shows that the stockholders of the Bainum-Phillippe Company are men of integrity, business ability and financial stability, with a satisfactory reputation where they are known.

The Committee recommends that the State Medical Association enter into an agreement with the Standard Auto Insurance Association for the writing of individual policies in accordance with the proposal of Standard Auto Insurance Association. The Committee further recommends that a committee be appointed by the State Medical Association for the ensuing year for the purpose of maintaining a connection between the State Medical Association and the Standard Auto Insurance Association and to continue during that year to have the subject of automobile insurance under consideration.

Respectfully submitted,

JAMES N. MCCOY, Chairman.

REPORT OF COMMITTEE ON SCIENTIFIC WORK

House of Delegates, Indiana State Medical Association:

Gentlemen: The scientific program prepared for this session constitutes the report of your Committee on Scientific Work.

Respectfully submitted,

LARUE D. CARTER, Chairman.

REPORT OF COMMITTEE ON ARRANGEMENTS

House of Delegates, Indiana State Medical Association:

Gentlemen: On Wednesday evening there will be a smoker at the New Hotel Roberts that promises to surpass any smoker that has ever been given by the society entertaining the State Association. Some real stunts have been provided and an entertainment that is well worth the time of any physician in the state to attend has been arranged. We feel sure that this will be, from the standpoint of entertainment, the most valuable part of the session at Muncie.

On Thursday evening there will be an open meeting for doctors and their families, and also the general public is to be invited, at the High School Auditorium. At this meeting there will be, first, a musical program, from 8:00 to 8:30, and at 8:30 Dr. W. A. Evans of Chicago, who has the Health Column of the Chicago Tribune, will deliver a popular address. This entertainment will be broadcasted by the Muncie Press Broadcasting Wireless Station. This station operates on 355 meters and should be heard at least all over the state.

The Local Committee on Arrangements felt that the above plan of entertainment on Thursday evening would be more profitable than attempting to stage a banquet at which a scientific program was

provided, as the ladies, no doubt, will be more interested in a subject such as Dr. Evans can so ably present than they would be in a scientific program. Also, it will give the public a chance to become better acquainted with medical ideals, and this, it occurred to us, is very essential at this time.

The following program has been arranged for the pleasure of the ladies attending the State Medical Meeting, and we would appreciate it if the doctors will communicate with the Local Committee on Arrangements and let us know how many ladies will accompany them, so that we can have some idea as to the number for which we should prepare.

Wednesday evening the ladies will be entertained at the Wysor Grand Theatre by moving pictures and vaudeville. The management of this theatre has assured us that they will make special efforts to arrange a program that will be very suitable for this occasion. Thursday noon a luncheon will be served at the Delaware Country Club, after which there will be a musical in the afternoon. Thursday evening the ladies will be expected to attend the public meeting at the High School Auditorium, at which Dr. Evans will speak. Friday, at 10:00 a. m., there will be an automobile ride over the city, visiting the places of interest. Some of the places which will be visited are as follows: Ball Brothers Fruit Jar Company, General Motors Corporation, parks, Indiana State Normal School, Durant Motors, etc. Twelve to one will be spent at "Wild Banks" Farm, the country home of Dr. and Mrs. C. M. Mix of this city, returning to the Hotel Roberts at 1:30. The committee in charge of the ladies' entertainment is as follows: Mrs. I. N. Trent (Chairman), Mrs. L. L. Ball, Mrs. Earl Green, Mrs. U. G. Poland, Mrs. C. E. Miller, Mrs. C. M. Mix and Mrs. S. G. Jump.

The Local Committee also urges that the various medical fraternities, class reunions, etc., be held either on Thursday or Friday noon, and if any such luncheons are being planned we will appreciate it if they will get in touch with us *immediately* so that we can make the necessary reservations at the hotels.

A golf tournament is being arranged for and we would appreciate it if any doctor who cares to play golf while he is here attending the State Medical Association meeting, or even cares to enter the tournament, will get in touch with either Dr. F. G. Jackson or Dr. C. A. Leatherman of this city *immediately*, who have this matter in charge.

On Thursday evening there will be dancing for all who care to indulge at the Hotel Roberts, after Dr. Evans's address, as late as they care to dance.

Respectfully submitted,

B. R. KIRKLIN, Chairman.

REPCRT OF COMMITTEE ON PUBLIC POLICY AND LEGISLATION

House of Delegates, Indiana State Medical Association:

Gentlemen: Your committee having to do with Legislation and Public Policy desires to make the following report:

No Legislative activities are reported for the reason that the Legislature has not been in session for more than special and specific purposes during the life of this committee.

Your committee would recommend to this Association that it at once take steps to better organize the profession, in defense of its own ideals, that a much larger number of the profession in the state be brought into the fold of this organization, and especially that it adopt means of bringing the profession into a much closer relationship to the public.

FRANK W. CREGOR, Chairman.

**THE JOURNAL
OF THE
INDIANA STATE MEDICAL ASSOCIATION**

Devoted to the Interests of the Medical Profession of Indiana

ALBERT E. BULSON, JR., B.S., M.D., F.A.C.S.
Editor and Manager

Office of Publication, 406 W. Berry St., Ft. Wayne, Ind.

SEPTEMBER 15, 1922

EDITORIALS

OUR PRESIDENT

William R. Davidson, President of the Indiana State Medical Association 1921-1922, was born in Evansville, Indiana, in 1875, of Scotch descent. His early education was received in the Evansville schools. He graduated in science from Wabash College, Crawfordsville, in 1896, and immediately thereafter entered Rush Medical College, Chicago, from which he received his medical degree in 1899, beginning the practice of medicine at Evansville at once, where he has continued to practice up to the present date. Post-graduate work was taken at Harvard Graduate Medical School, and New York post-graduate schools.

Dr. Davidson was one of the original members of the Board of Councilors of the Indiana State Medical Association when first organized, and later served as vice-president of the Association. He is a Fellow of the American College of Surgeons; charter member of Evansville Rotary Club; member of all Masonic bodies; past commander Knights Templar; and member of numerous local clubs. During the World War he served in France as Chief of Surgical Service, Base Hospital No. 120.

In 1905 Dr. Davidson was married to Miss Helen M. Chick, of Boston, Massachusetts. They have one son, Donald, fifteen years of age, now a senior in Central High School, Evansville.

Dr. Davidson has been associated in the Walker Hospital with Dr. Edwin Walker and Dr. James Y. Welborn since 1905, and since the death of Dr. Walker recently, has acquired an interest in the hospital.

The Indiana State Medical Association is fortunate in having so worthy a President, and we anticipate that this annual session, under his leadership, will be one of the best in the history of the Association.

UNETHICAL ADVERTISING

Since the publication of the July number of THE JOURNAL, in which we discussed briefly the subject of unethical advertising on the part of physicians, we have received a number of letters from readers touching upon the subject.

Some of the letters heartily commend the suggestion that something should be done to check the tendency on the part of many doctors to unethically advertise themselves, while other letters are from writers who apparently desire to apologize for their own actions by putting forth unfounded claims that practically all doctors advertise unethically. A few of the correspondents make the bold, indefensible and untrue statement that *all* of the leaders in the medical profession are guilty of newspaper advertising. Aside from the letters concerning the matter, we have been fairly deluged with newspaper clippings which really show to what an extent the practice of many medical men in securing newspaper publicity has extended.

In carefully analyzing the correspondence, and especially the newspaper clippings, we find that in the main the men who try to boost themselves by newspaper publicity are residing in the smaller cities and towns, and that even there it is confined to one or two men in each locality. In making this statement we are not unmindful of a few breaches of professional ethics, to say nothing of acts that are in exceedingly bad taste, as seen in the newspaper and magazine write-ups of a few of the so-called "clinics" in Indiana. A striking example of this is the laudatory illustrated write-up of one of the Indiana "clinics" in the August number of the *American Magazine*, and almost a duplicate of the same as sent out by one of the press associations and reproduced in many of the daily and weekly papers of the country. Aside from this some of the so-called "clinics" have been featured in the photogravure sections of Sunday papers and written up as special articles for various lay and religious papers. Also, some of the clinics have not hesitated to mail out broadcast to the laity illustrated brochures picturing elaborate offices and mentioning the various paraphernalia employed and recounting the unusual qualifications and skill of the various members of the "clinic".

The whole thing is more or less nauseating, and so smacks of commercialism of the rankest sort that it is no wonder that those men in the medical profession who do not resort to such unethical practices, and there are many such, feel grieved that their confreres will stoop to such practices. It is idle talk to say that the leaders in the medical profession resort to or ever did resort to unethical newspaper advertising to further their own ends, for while now and then one of the leaders may have been guilty of such practices in his younger days, yet we venture the assertion that for the most part very few of them are guilty. As young and struggling men in the medical profession they followed the straight and narrow course, and they are doing so yet, just as hundreds of younger men in Indiana are doing now. However, it is a little discouraging for the younger

men, who want to be honest and want to be ethical, to note the frequency with which some of the older men are guilty of breaches of ethics and decency.

As we already have stated in previous editorial comments on this subject, it is time to live up to our standards of conduct or else have no rules and let every man do as he pleases whether his conduct meets the approbation of his confreres or not. It may not be possible to control the action of patients, who in rare instances desire to parade their ills and the names of their doctors in the daily papers, and especially is this true when patients reside at a distance and give their news items to their home papers. However, as we have stated many times, there probably isn't a newspaper editor and proprietor in the country who will not respect the wishes of medical men and refrain from publishing the names of doctors in connection with medical and surgical cases if requested to do so. The better class of people in every community know that a doctor is "tooting his own horn" when they see that doctor's name appearing repeatedly in the lay papers in connection with the treatment of patients, and the practice of seeking such notoriety is looked upon unfavorably by the class of lay persons whose good opinion every reputable doctor should court. The so-called "clinics" are no better than individuals when they resort to the kind of magazine and newspaper publicity to which our attention has been directed quite recently and referred to in this editorial comment.

The propriety of advertising of various kinds is covered by the new code of ethics from which we again quote:

"Solicitation of patients by physicians as individuals, or collectively in groups by whatsoever name these be called, or by institutions or organizations, whether by circulars or advertisements, or by personal communications, is unprofessional. That does not prohibit ethical institutions from a legitimate advertisement of location, physical surroundings and special class—if any—of patients accommodated. It is equally unprofessional to procure patients by indirect through solicitors or agents of any kind, or by indirect advertisement, or by furnishing or inspiring newspaper or magazine comments concerning cases in which the physician has been or is concerned. All other self-laudations defy the traditions and lower the tone of any profession, and so are intolerable. The most worthy and effective advertisement possible, even for a young physician, and especially with his brother physicians, is the establishment of a well-merited reputation for professional ability and fidelity. This cannot be forced, but must be the outcome of character and conduct. The publication or circulation of ordinary simple business cards, being a matter of personal taste or local custom, and sometimes of convenience, is not *per se* improper. As implied, it is unprofessional to disregard local customs and offend recognized ideals in publishing or circulating such cards."

"It is unprofessional to promote radical cures; to boast of cures and secret methods of treatment or remedies; to exhibit certificates of skill or of success in the treatment of diseases; or to employ any methods to gain the attention of the public for the purpose of obtaining patients."

As a solution of the problem occasioned by the growing tendency on the part of many doctors, especially in small towns, to seek newspaper publicity and notoriety, we suggest that the Indiana State Medical Association adopt a resolution in which unethical newspaper advertising is condemned as being distasteful to the medical profession, and politely requesting the newspaper editors or managers of the state to refrain from publishing the names of doctors in connection with medical and surgical cases. Such a resolution should assure the editors that medical men at all times will furnish the newspapers with such facts as the public ought to know. However, the giving out of such facts does not constitute a breach of ethics or propriety which every doctor is bound to respect. This resolution should be sent to every lay periodical in the state, and we venture the assertion that there isn't a newspaper editor or manager in the state who will not respect the request that is made.

Certainly it is time to do something to curb the tendency toward the rankest kind of commercialism on the part of many medical men. Already we are threatened with annihilation by so many things from without that it seems unnecessary to dwell upon the necessity of correcting the evils from within, but we must bring our medical men into closer harmony, and to a realization of the fact that we are practicing a profession and not a trade. If we cannot sustain the principles and traditions of the profession, then we deserve to perish.

THE RETIREMENT OF DR. HURTY

After more than twenty-five years of long and active service as a health commissioner for Indiana, Dr. John N. Hurty voluntarily retires and has been succeeded by Dr. William F. King, who for twelve years has been Dr. Hurty's assistant. Dr. Hurty's administration has been characterized by vigorous enforcement of the health laws, and by an effort for the betterment of public health and sanitary conditions in Indiana which has placed the state in the front rank of those that appreciate the value of public health work. Many complimentary things have been said concerning Dr. Hurty's work as a public health official and he is deserving of all of the praise that has been accorded him, not only in this state but in other states as well. Always active and pugnacious, though not always tactful, he sometimes has made enemies through his conduct and the tenacity with which he has stuck to a given course of action which he thought was right, but in the end he nearly always has secured endorsement and praise from even his enemies, as it has been recognized that back of all has been an ability and a purpose which has redounded to the welfare and best interests of the people of Indiana. His service has placed Indiana in a high place among the states that try to solve public health problems.

and it may be safely said that to Dr. Hurty alone is due nearly all of the credit for the protection that has been given the Indiana people in public health matters and for the place that Indiana has been given in public health work.

THE CONDUCT AND POLICY OF THE MAYO CLINIC

As everyone knows, a good deal of criticism of one kind or another has been aimed at the Mayo brothers of Rochester, Minnesota, and lately against the Mayo Clinic. Recently, or subsequent to our editorial in the July number concerning unethical advertising, a number of Indiana doctors have seen fit to say some uncomplimentary and even vicious things concerning the Mayo Clinic in its relation to unethical newspaper publicity. We are not interested in the Mayo Clinic in any way whatsoever, but we are interested in the question of fair play and we resent the charge that the Mayos or any considerable number of the prominent members of the medical profession are guilty of anything that can be construed as unethical or in the slightest degree tinctured with the rank commercialism about which we have complained and which we shall continue to complain. The trouble of it is there are altogether too many medical men who will make malicious and unsustained accusations concerning confreres of whom they are jealous because such confreres possess more attainments and have made greater success in the profession; or in attempts to defend their own misdeeds they try to make out that everybody else is as bad as they are. Some of the Indiana doctors have freely charged that the Mayos are the rankest kind of advertisers, that they are fee dividers and are guilty of all kinds of unethical conduct. All of this is untrue and is so palpably false and inconsistent as to merit no answer on the part of those who are being accused. The fact of the matter is the Mayo brothers will challenge any person to produce the slightest evidence that either of them or anyone connected with the Mayo Clinic has been guilty of unethical conduct.

In this connection it may be well for our readers to know that the Mayo Clinic is not a personal business conducted by the Mayo brothers, but is an institution. Its funds and properties are controlled by a board of nine trustees, and its professional control is through a council of eleven members, six elected by 121 members of the permanent staff and five appointed by the board of trustees. No person directly profits from the clinic except as paid a salary. Any residue after salaries have been paid is added to the permanent endowments. The Mayo Clinic, while conducted along the highest ethical standards also is conducted in a businesslike way which might well be imitated by other professional men. In fact the medical profession should be thankful that the Mayos have not

been influenced by any maudlin sentiment nor exercised any unfair business tact in order to increase the amount of their work or income, and, while at all times bestowing charity where charity is due, they have not been guilty of pauperizing the community as is the case with some of the large clinics in our cities. In fact the Mayo Clinic issues a printed statement of which the following is a copy:

"1. Every patient who comes to the Clinic receives the care and attention necessary without regard to financial status, social condition, race or creed. What he receives is measured by his necessities, not by his ability to pay. While the Clinic is ready and willing to give freely of its services to the worthy poor, each patient who is able to pay a fee is required to do so. The hospitals in Rochester are not owned by the Clinic although under its medical and surgical direction. Every patient must be provided with money for his maintenance, hospital expenses and transportation.

"2. All the moneys that are received by the Mayo Clinic, beyond a reasonable and just return to its staff, are used to create endowments the income of which shall be devoted perpetually to the relief of human illness, to the advancement of research as to the cause and prevention of disease, and to medical education and such other welfare movements as are correlated with health problems.

"3. The Mayo Clinic, its endowments, physical equipment, lands and other properties, are held by trustees in perpetuity for the sick of this and future generations."

We do not think that the Mayo Clinic needs any defense, in fact we believe that other "clinics" could well follow the Mayo Clinic in its business and ethical conduct even if not duplicating the quality of service rendered, but we believe that something definite should be said in answer to some malicious charges that have been made by a few Indiana men who, while free to condemn, have not been able to offer acceptable proof.

USELESS COMMITTEES

Ever since the organization of the Indiana State Medical Association we have tolerated and perpetuated a number of useless committees. This is not saying that the Association as an organization and the individual members of it would not profit through the existence of such committees if they did their work properly, but the fact of the matter is those committees, with but one or two exceptions, have failed absolutely to do anything worth while, and so far as their usefulness is concerned they might as well not have existed. It takes a charge of dynamite to make some of the committees functionate, and we might as well have committees to procure Pierce-Arrow motorcars for the inhabitants of Mars as to have some of the committees that we have now. Every year the secretary of the Association asks the chairmen of committees to get their reports ready for presentation at the annual session and to have the same published in the presession number of THE JOURNAL. Through the year most of the

committees exist only on paper, and at the eleventh hour each chairman usually after much urging prepares a perfunctory report, based on little thought and less action on the part of the committee, and the same is perfunctorily approved by the House of Delegates and that ends the matter. Occasionally a committee like that on Public Policy and Legislation really does some work, but such a condition of affairs is due to a chairman who is devoted to the interests of the Association and who is willing to give his time and his attention to the work that has been assigned him. Dr. W. N. Wishard, for many years the chairman of that committee, deserves unstinted praise for the work that he has done for the Association, and the work has not been done without great effort and much sacrifice of time. His committee is about the only one that ever has done any real work, and the report of which was worth the effort put forth to prepare it. This brings up the question of the appointment of the committee members. Presidents cannot be too careful in the selection of those who are to act upon important committees, for a drone as a chairman of a committee may nullify absolutely the effects of such committee. Men should be selected for the committees because of their peculiar qualifications for membership on those committees and their willingness to work. The few committees which our Association has at the present time really are needed, but most of them could be abolished if we are to judge from the amount and character of work that they have done during the last few years. By all means let us have some sort of an awakening on the part of those who are representing the Association on important committees or else do away with the committees entirely and save time and worry.

THE GORGAS MEMORIAL

The American Medical Association, through a special committee, is making an appeal for funds to be used as a fitting memorial to mark the humanitarian services of the late General William C. Gorgas and his beneficent influence upon the life and work of mankind throughout the world. It has been decided that this memorial shall take the form of a scientific institute for the study of tropical diseases and preventive medicine, and Panama City has been selected as the place for that institute. The plan is to build at Panama an institute for the study of tropical and infectious diseases, with a hospital, laboratories, departments for research and all other facilities required in an institute of this character erected and administered according to the most progressive, modern ideals. The government of Panama has donated the great Santo Tomas Hospital, and also the ground on which it is proposed immediately to construct the buildings as they have been described. In conjunction with this work in Panama there will be

established in Tuscaloosa, Alabama, the Gorgas School of Sanitation for the purpose of training public health workers, sanitary engineers and public health nurses, especially educated to deal with the problems peculiar to the Southern states.

An endowment of six and one-half million dollars will be required to enable the commission to carry on the plans which have been formed. The physicians of our country and especially the members of the American Medical Association surely will not disregard the memory of a former president and one who has done so much for the welfare of the people of the whole world in tropical and semi-tropical countries and in all places subject to the inroads of infectious diseases. The campaign for funds is to be international. A large response is expected from North, Central and South America, since the nations of these countries have been the chief beneficiaries of the labors of General Gorgas. It is fitting that his co-workers of the American medical profession should be requested to respond generously to this appeal. It is hoped that every member of the American Medical Association will make as liberal a subscription as possible. Any sum will be gratefully accepted. Checks should be drawn to the order of the "Gorgas Fund" and should be mailed to the American Medical Association, 535 North Dearborn Street, Chicago, Illinois.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service. It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

The Time—Wednesday, Thursday and Friday, September 27, 28 and 29th.

The Place—Muncie.

The Event—The annual session of the Indiana State Medical Association.

INDIANA roads were never better. Railroad and interurban service was never as bad. Why not go to the Muncie Session by automobile. If you do not know the way, ask a representative of the Hoosier Automobile Association or consult any good road map.

A CHIROPRACTOR baby specialist is a new one in the field of special practice, as evidenced by the advertisement of a chiropractor who is locating in one of the central Indiana cities. It is bad enough to punish adults by the pulling and mauling of chiropractors without subjecting babies to such maltreatment.

THERE is no reason why the "clinics", or group practice of any kind, should not conform to the restrictions governing the individual physician so far as ethics are concerned. To resort to commercial practices in soliciting or in the securing of patients, whether through unethical newspaper advertising or in any other way, should not be condoned in them any more than it is condoned in the individual physician.

THE smoker on Wednesday evening at the Hotel Roberts, according to the announcement of the Committee on Arrangements for the Muncie session of the Association, promises to surpass any smoker that ever has been given by a society entertaining the Association. Some real "stunts" have been provided, and an entertainment that is well worth the time of any physician in the state to attend has been arranged. Members are urged to come to Muncie early in order that they may not miss this treat.

WITH the opening of the schools in the fall there comes the usual increase in the number of communicable diseases among children. Much can be accomplished in stopping the spread of disease by careful school inspection, but we have no patience with the inspection that occurs in some schools where so-called nurses and others who have never had any medical training are given the responsibility of the inspection. Incidentally it is time to preach the value of vaccination not only against smallpox but diphtheria as well.

LAY control and dictation of the management of the institutions in which medical men are interested directly or indirectly is bound to come unless something is done to prevent it. Not alone this, but lay control of everything pertaining to the practice of medicine eventually will come unless the spineless doctors who fail to see the growing tendency of the times awaken to the danger and put on their fighting clothes in an attempt to save a reasonable amount of independence for themselves. This is no idle dream, and those who think differently will have occasion to learn the truth perhaps when it is too late.

It is charged that the state journals, including their editorial policies, are controlled and dominated by the American Medical Association. Nothing can be further from the truth.

We can name two or three state journals that are not only independent in thought but usually opposed to many of the A. M. A. policies and do not hesitate to say so. Even this JOURNAL declines to receive dictation from anyone, and the A. M. A. office in Chicago never has and never will influence the editorial opinions unless such influence is in keeping with the ideas of the editor and the members of the council who are responsible for the publication.

THE Physicians' Protective Association of Buffalo, made up of 450 of the 857 physicians in that city, is carrying on an energetic fight against the pauperization of the public through free medical services in local hospitals. Abuses are tolerated under the mask of public health and the Buffalo physicians believe that it is time to put a stop to the practice of making dependents and paupers of people who are able to pay something for the services rendered. The question concerns the public more than it does the medical profession, for no community can afford to tolerate widespread and unnecessary pauperization in the form of any kind of unnecessary free aid.

THE Muncie medical profession is composed of a live bunch of men. They are doing things in a medical way, and on the surface they seem to be working in perfect harmony. They extend an unusually cordial welcome to those who will attend this year's session of the Indiana State Medical Association, and much is promised in the way of enthusiasm and entertainment. Anyway, the scientific program is not the greatest attraction offered by our annual sessions. The spirit of good fellowship and the opportunity to get acquainted with one another is worth much in stimulating cooperation and harmony among the medical men of the State, and the Muncie medical men are going to help along this spirit.

THE chiropractors held a convention in Fort Wayne the last week in August. They advertised the event extensively in the newspapers and by placards which were posted in conspicuous places, to say nothing of a parade headed by a band, through the principal business streets. The whole thing reminded us of a one-ring circus, monkeys and all. The program for this convention, as published in the newspapers, showed that the chiropractors do not discuss diseased conditions, and cause and treatment, but they do discuss such questions as how to advertise and how to get the money, thus showing, as is well illustrated by their catalogs and other literature, that chiropractic is a business and not a profession.

IN his presidential address at the St. Louis session of the A. M. A. Dr. George E. de Schweinitz said some pertinent things concerning the necessity of acquainting the public with the aims and objects of the medical profession and, in commenting on this, a pastor of a leading St. Louis church says "to educate public opinion is a painful duty but it is one that must be faced and each of the great professions has its allotted task in keeping the public well informed on the subject on which it can speak with authority. * * * Does the medical profession as a whole take its proper part in guiding and influencing public opinion in those matters wherein it alone can speak with authority?"

MEDICAL specialists of one kind or another are getting so numerous that in a short time there will be no old fashioned general practitioners. It wouldn't be so bad if the specialists were all qualified, but unfortunately a large proportion of the so-called specialists are unscrupulous and unqualified. The American College of Surgeons is supposed to discriminate between the qualified and unqualified surgeons but has failed to do so in many instances. The time will come when societies will have a house cleaning and show up the untrained specialists. Already some of the societies composed of specialists have drawn the line, but the trouble of it is before they drew the line a lot of ill-trained men gained membership. There are hosts of other untrained men who never will make application for membership in such societies and probably do not care to do so.

WE still receive newspaper clippings from Elwood indicating that the name of one of the doctors there, president of the county medical society, appears in the daily papers every day or so in connection with a report of medical and surgical cases, and we have been asked by other doctors, "What is the State Medical Association going to do about it?" As a matter of fact, the State Medical Association will do nothing about it, for each county medical society is the judge as to the qualifications of its members, and not only approves but censors the conduct of its members. If the county medical society is satisfied that one of its members is so guilty of unprofessional conduct that he should be punished for the offense, then it is up to that county medical society to bring the offending member before the society to answer charges and receive such sentence as the majority of the members of the society may think indicated after the facts have been presented and properly analyzed.

As will be noted in the treasurer's report published in this number of THE JOURNAL, the Indiana State Medical Association now has

about ten thousand dollars in the treasury. By all that is good and holy let us not look upon this plethoric purse with covetous eyes if we have any impractical schemes which need funds in order to carry them to successful fruition. If we are going to appropriate any money for anything outside of the legitimate expenses of the Association why not give something to the Committee of Public Policy and Legislation with instructions to get busy promoting wise medical legislation in upholding our present standards of medical education and licensure. Furthermore, this same committee could with propriety start a campaign which would have as its object the education of the public concerning health matters, and to do this effectually would require some funds. In other words, the medical profession should resort to propaganda, and it will be necessary to do so if we are to offset the effects of the teaching of medical pretenders and quacks who today are spending a hundred dollars to our one dollar for accomplishing ends which are diametrically opposed to all that we teach and practice.

IT cannot be doubted that ignorant people get their medical knowledge from quacks. In its ultimate analysis this is due to failure on the part of the regular medical profession to give the public as much information as it should have concerning the nature, cause and treatment of disease. It is true that boards of health attempt to disseminate knowledge by means of leaflets, and pamphlets, but this does not answer the purpose. What we really need is more dissemination of knowledge through methods that will reach the people who should have the knowledge. Newspapers and other lay periodicals could do much toward educating the public but they cannot do this without being furnished with the proper material, which must come from educated medical men. The *Chicago Tribune*, through its column entitled "How to Keep Well", edited by Dr. W. A. Evans, perhaps has done more to put its readers in possession of good advice on medical subjects than any other single agency devoted to public health work. What a wonderful work could be accomplished if we could induce every newspaper in the country to have such a department as that mentioned and have the same edited by a recognized authority. Here is a chance for the American Medical Association to get busy, and as a suggestion we believe that it is not only possible but highly desirable to have health talks not only syndicated but guaranteed appearance in every newspaper of the country.

WE have been hearing much in the lay press concerning rejuvenation by testicular transplantation and occlusion of the seminal ducts. Probably there always will be a search for some agent which will revive the fading energies of

the human race, and for ages there has from time to time sprung up some presumably magic agent which is heralded as a rejuvenator, later to be proven worthless. As yet it has not been demonstrated that anything will renew sexual vigor which has been reduced as a result of natural processes. The fundamental error in the whole scheme of rejuvenation is the assumption that sexual vigor is dependent upon any one thing. As a matter of fact it is dependent upon a large number of functions operating coordinately with each other, and the effort to restore a single one of those functions without repairing all the others ends in failure. As has been aptly stated, the efforts to rejuvenate old men by the implantation of youthful testicular substances and thus perhaps stimulating only one of the links in the endocrine chain is a good deal like trying to strengthen a wornout chain by inserting one new link. A careful analysis of the cases in which rejuvenation is supposed to have occurred as a direct result of the employment of some of the methods recommended indicates that the questionable rejuvenation is purely psychic and shortlived. Probably through all the ages to come there will be those who will seek the Fountain of Youth, but like Ponce de Leon they will be doomed to disappointment.

It is reported that Dr. Adolph Lorenz is to return to this country late this fall to resume his work of paying off the debt that he thinks he owes to the American people, by caring for some of the crippled children of this country. Of course Dr. Lorenz need not come to this country to find something to do, for there are plenty of crippled children in his own country requiring such attention as he can give, but in reality the parents of Austria's crippled children cannot pay for the services, and many of those in America for whom Dr. Lorenz renders services are able and do pay handsomely for the services. In fact it is stated on reliable authority that Dr. Lorenz is making a handsome income from his so-called payment of the debt of gratitude to America. However, an analysis of the matter leads us to believe that Lorenz' visit and the widespread newspaper publicity given his work has presented forcibly to the attention of the public at large the presence of large numbers of crippled children and the possibility of giving them relief. As the New York commissioner of health says, "In spite of the fact that the orthopedic hospitals and orthopedic surgeons of New York City enjoy world wide renown, the community has failed to make full use for their cripples of these advantages so easily and freely obtainable." The Lorenz visit has served to bring forth these little sufferers, and once they are located it is hoped that they may be brought to the attention of our surgeons who are as capable as Dr. Lorenz to take care of them.

As can be testified by the educational committee of the A. M. A. no little trouble has been experienced in making those in control of the Rockefeller Foundation understand the attitude of the medical profession toward medical education and the function which medical men should have. Any controversies that have arisen have been due largely to the fact that the Rockefeller Foundation is dominated by a lay element which either cannot or will not consider medical problems in a professional way. Just now the Michigan medical men are up in arms concerning the proposal of the Rockefeller Foundation to establish a separate school of nursing and to create a separate independent profession no longer subservient to the medical profession. The graduates from this school are to be classed as "super-nurses", and their activities are to be directed along the lines of preventive medicine, health clinics, prenatal clinics and public health work, with, as they state, the home as their field of activity. These activities they will engage in without the aid, advice or direction of doctor or the profession. Such a move would deprive nursing education of its most important contact with those whose years of experience qualify them to care for the sick. It also would deprive them of the training and contact which is absolutely necessary for the best results if the patient, the one most concerned, is to be benefited by the enterprise. As understood by some of the medical men of Michigan, the plan as proposed would have a tendency to make the nurses superior to the physician who is responsible for the treatment of the patient, and the views of the medical profession would have no weight in the training of nurses. It remains to be seen whether the University of Michigan, which has been flirting with various schemes that seem to be antagonistic to the highest type of medical education and practice, will "fall" for the plan offered by the Rockefeller Foundation. Perhaps the million dollar fund which accompanies the offer will have a determining voice in the matter.

DEATHS

MAURICE H. KREBS, M.D., of Huntington, died August 17 as the result of an acute attack of heart trouble, at the age of forty-four years. Dr. Krebs graduated from the Columbia University College of Physicians and Surgeons, New York, in 1900. He served in the Spanish-American and World wars, retiring from military service with the rank of lieutenant colonel. Dr. Krebs was a member of the Huntington County Medical Society, the Indiana State Medical Association, the American Medical Association, the Chicago Otolaryngological Society, the New York Ophthalmological Society and had recently been elected to the American College of Surgeons.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION. Patronize these advertisers, for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

DR. J. V. REED and family of Indianapolis spent the month of July at Trout Lake, Wisconsin.

DR. EARLE H. MITCHELL has located at Maxwell, Indiana, for the practice of medicine and surgery.

DR. W. F. KING has been named secretary of the state board of health to succeed Dr. J. N. Hurty.

THE Henry County Medical Society held its annual picnic at the Westwood Country Club, Evansville, August 11.

DR. L. F. SWANK has opened an office for the general practice of medicine in the Haynes Building at Elkhart, Indiana.

ST. CLOUD, Minnesota, has been selected as the site for a new \$1,000,000 hospital for service men of the World War.

THE Thirteenth District Medical Society held its annual outing September 1 at the Rochester Country Club on Lake Manitou.

DR. JOHN F. SOUTH, formerly of Louisville, Kentucky, has moved to Columbus, where he will take up the practice of medicine.

DR. S. J. STOTLEMEYER has resumed his practice of medicine at Anderson after living in Texas for the last several months.

DR. JAMES WYNN announces the continuance of his office at 421 Hume-Mansur Building, Indianapolis, for the practice of internal medicine.

DR. E. VERNON HAHN has announced the continuance of his office at 421 Hume-Mansur Building, Indianapolis, for the practice of surgery.

THE Fountain-Warren County Medical Society held a meeting in Attica, August 3. A paper was presented by Dr. A. C. Arnett of Lafayette.

DR. S. R. BOGESS, formerly of Lawrenceburg, Ky., has moved to Batesville, Indiana, where he will be associated in the practice of medicine with Dr. Carney.

THE State Medical Golf Association will meet and play on the Muncie Course on Wednesday morning, September 27, the first day of the medical meeting.

THE Wabash County Medical Society held a meeting August 15 at Wabash. Papers were presented by Dr. James Wilson, of Wabash, and Dr. F. F. Brown, of Lafontaine.

DR. E. B. ERSKINE has resigned his position as assistant surgeon at the State Soldiers' Home, Lafayette, to become lieutenant in the United States Navy. He has been assigned to the base hospital at Great Lakes.

THE Huntington County Medical Society held a meeting August 1 at the Huntington Country Club. Dr. J. M. Hicks presented a paper on "Diagnostic Value of Pain and Rests in Accidents and Surgical Diseases".

DR. JOSEPH W. SCHERECHEWSKY, assistant surgeon-general, U. S. Public Health Service, has been commissioned to conduct an investigation into the cause of cancer. Headquarters for the investigation will be established in Boston.

AFTER spending several years in Ecuador, South America, as chief surgeon for the South American Development Company, Dr. E. Ray Royer has returned to the United States and will take up the practice of medicine at North Salem, Indiana.

A SCHOOL for the blind, the first of its kind in Armenia, will be opened in Alexandropol by the Near East Relief under direction of Dr. R. T. Uhls, of Kansas City, Mo. The first pupils will be one hundred fifty Armenian war orphans, most of whom are victims of trachoma.

THE Eye Sight Conservation Council of America, New York City, is establishing a special mailing list for writers and lecturers interested in the subject of conservation of vision. Data and materials will be prepared and mailed periodically to persons whose names are on this mailing list.

A SCHOLARSHIP has been established at the Medical College of the State of South Carolina, Charleston, by the American Bronchoscopic Society in memory of the late Dr. Henry Lowndes Lynch. The dean of the medical school has been empowered to award the scholarship to a deserving student.

DRS. C. E. and CARL W. SAWYER have announced that Dr. Howard D. McIntyre and his wife, Dr. Aurelia P. McIntyre, are associated with them at the Sawyer Sanatorium, White

"Just What a Ligature Should Be"

Armour's Catgut Ligatures, Plain and Chromic, boilable, strong, absolutely sterile, 60-inch, 000 to 4 inclusive.

Iodized Catgut Ligatures, non-boilable, strong, sterile and very supple, 60-inch, 00 to 4 inclusive.

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ELIXIR OF ENZYMES
—aid to digestion and vehicle for iodids, bromides, etc.
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A strictly modern sanatorium, fully equipped for the scientific treatment of all nervous and mental affections. Situation retired and accessible.

Alcoholic and Drug Habit Treated by the Gradual Reduction Method Only

An addition of thirty rooms has lately been added to our already large sanatorium. This makes it possible for us to separate all male and female mental patients. For details write

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Oaks Farm, Marion, Ohio. The Sawyer Sanatorium is devoted solely to the treatment of nervous and mental diseases.

Two chairs in the University of Cincinnati College of Medicine were founded at a meeting of the board of directors in July, honoring John D. Rockefeller and Andrew Carnegie. The professorship in obstetrics will be known as the John D. Rockefeller Chair of Obstetrics and the professorship in biochemistry will be known as the Andrew Carnegie Chair of Biochemistry.

THE Tri-State District Medical Association will hold its annual meeting at Peoria, Illinois, October 30th, 31st, November 1st and 2nd. Papers will be presented by many of the most prominent doctors of the country. The program committee consists of Dr. Edward H. Ochsner, Chicago; Dr. Walter L. Bierring, Des Moines, Iowa; and Dr. George V. I. Brown, Milwaukee, Wis.

PROFESSOR SCHOEP in the bulletin of the Belgian Chemical Society, reports that the sample of minerals from the Congo yield 424 kg. of uranium and 139 mg. of radium to the ton. Two new kinds of minerals, extremely radioactive, have also been found. One of the minerals has been named "curite" and the other "kasolite" and their crystals are soluble in nitric acid, and the radium salt can be extracted from the fluid without passing through the usual calcination process.

ACCORDING to tables issued by the United States Department of Commerce, the longest lived people in the United States are the Kansans, the expectation of life at birth in Kansas being 59.73 for white males and 60.89 for white females. Wisconsin ranks next with 58.77 for white males and 60.70 for white females. For cities, Washington outranks all others with 53.93 years as the expectation of life for white males and 59.83 for white females. Pittsburgh comes at the foot of the list with 57.15 for white males and 50.42 for white females. Indiana, for males, is eighth in the list of states with 56.84, and seventeenth for females with 57.45.

IN addition to the articles enumerated in our letter of August 1st, the following articles were accepted during July: Intra Products Company—Ven Calcium Cacodylate Ampules—Ipc. Winthrop Chemical Company—Theocin.

During August the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: G. W. Carnrick Co.—Corpus Luteum—G. W. C. Co. Gradwohl Laboratories—Sterile Solution of Mercury Oxycyanide—Gradwohl. Ledelre Antitoxin Laboratories—Pollen

Antigens-Lederle, Solution Epinephrine-Lederle. New York Intravenous Laboratory—Loeser's Intravenous Solution of Mercury Oxycyanide. Parke, Davis & Co.—Antipneumococcic Serum (Polyvalent). Winthrop Chemical Co.—Luminal Sodium Tablets 1½ grains.

SOCIETY PROCEEDINGS

District—Councilor	No. of Counties	MEMBERSHIP CONTEST		
		1921 Memberships	1922 Memberships to date	Percentage
1st—Dr. Willis	7	176	175	.99
2nd—Dr. Schmadel	7	149	145	.96
3rd—Dr. Leach	9	130	117	.90
4th—Dr. Osterman	10	138	136	.98
5th—Dr. Weinstein	5	158	160	1.02
6th—Dr. Spilman	8	150	160	1.07
7th—Dr. Eary	4	425	442	1.04
8th—Dr. Conrad	5	172	164	.95
9th—Dr. Moffitt	10	253	251	.99
10th—Dr. Shanklin	5	151	140	.93
11th—Dr. Black	6	191	191	1.00
12th—Dr. Calvin	8	241	247	1.02
13th—Dr. Berteling	8	274	254	.92
	92	2608	2582	

CORRESPONDENCE

THE MAYO CLINIC AND NEWSPAPER ADVERTISING

Chicago, August 2, 1922.

To the Editor:

I have just read with great interest Dr. Reynard's article, "Shall We Advertise?", and your able editorial, "Unethical Newspaper Advertising," in your July issue, and find in both references to the Mayo Clinic.

Permit me to say, I was asked very recently to advertise the "Chicago Great Western Railway" schedule in Medical Journals with the purpose of advising physicians in different states—particularly Kansas, Missouri and Nebraska—how they might put patients on a sleeper at night and deliver them next morning in Rochester, Minnesota. The natural inference of course was that these patients were being sent to the Mayo Institute. But even the railroad authorities refused to have Mayo Clinic mentioned in their advertisements because they knew the Mayos objected to it.

How can physicians use the Mayo Clinic as an excuse for advertising, when even railroad authorities know the Mayos decline to have their institution mentioned in general advertisements?

E. WRIGGINS.

Inconsistency?

Fort Wayne, August 10, 1922.

To the Editor:

The article in the July number of THE JOURNAL by E. G. Reynard, of Union City, against advertising, is peculiarly inopportune because of the fact that the current "American" contains a write-up of the Union City aggregation of celebrated specialists, with a life history of each, in which all medical society affiliations are listed and the military record of each emphasized. This material could only have been furnished by the doctors themselves and therefore it makes a travesty of the preaching you publish.

"Consistency, thou art a jewel."

Yours truly,

B. VAN SWERINGEN.

(Dr. Reynard is not a member of the advertising "aggregation" above mentioned, so it seems to us that there is nothing inconsistent in his preaching unless it can be proven that he himself is guilty of the acts he condemns.—Editor.)

Commendation.

To the Editor:

It affords me pleasure to compliment you upon the quality of THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION. The original articles are of high grade, but it is in particular the editorials which makes me wish to shake your hand. Were more of the profession willing to fall in line with the ideals set forth in the editorials, I am sure the medical men of the state would occupy a vastly higher and more respectable plane.

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Respectfully,

E. C. DENNY, M.D.

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Owned, Published and Controlled by the Indiana State Medical Association

ISSUED MONTHLY under the Direction of the Council

VOLUME XV
NUMBER 10

FORT WAYNE, IND., OCTOBER 15, 1922

Per Year, \$3.00
Single Copy, 30 Cents

CONTENTS

	Page
ORIGINAL ARTICLES	
Status of the Indiana Medical Profession. Wm. R. Davidson, Evansville.....	337
The Treatment of Carcinoma of the Uterine Cervix. Stanley A. Clark, South Bend.....	339
Disturbances of Carbohydrate Metabolism. J. H. Warvel, Indianapolis.....	343
Constructive Thinking in Our Medical Organizations. A. W. Childs, Madison.....	350
EDITORIALS	
Surgery in Cardiorenal Disease.....	353
Cancer Week.....	353
Public Health Work Aided by Fish.....	353
DEATHS	
Augusta Stone, Vincennes; Joseph C. Purdy, Terhune; Stephen M. Bennett, New Goshen; David R. Carter, Epsom; Oliver S. Coffin, Alexandria; James G. Webster, Colfax; J. T. Tresidder, Tipton; John H. Bull, Indianapolis; E. M. Hoover, Elkhart.....	359
(Continued on Page xiii.)	

Next Annual Session, Terre Haute, Sept. 26, 27, 28, 1923. List of Officers and Committees on Adv. Page 1.
Entered as Second Class Matter, January 20, 1908, at the Postoffice at Fort Wayne, Indiana, under Act of Congress of March 3, 1879. Accepted for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized October 18, 1918.

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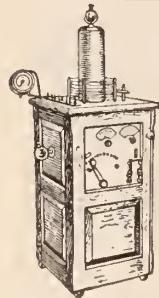
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THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF INDIANA

ISSUED MONTHLY under Direction of the Council

ALBERT E. BULSON, Jr., B.S., M.D., Editor and Manager

OFFICE OF PUBLICATION: 406 West Berry Street, FORT WAYNE, INDIANA

VOLUME XV

OCTOBER 15, 1922

NUMBER 10

ORIGINAL ARTICLES

STATUS OF THE INDIANA MEDICAL PROFESSION*

W.M. R. DAVIDSON, M.D.
EVANSVILLE, INDIANA

The opportunity during the past year to come in touch with the thought of the profession in Indiana has been unusual. Personal contact and the exchange of letters have shown the interest which the physicians of Indiana are giving to the welfare of their calling. It has been, and should be, a revelation to the thoughtful that the physicians are looking ahead to their advancement. It is fitting that the questions most prominent throughout the state should be brought before this Association for its consideration and for its aid in solving the various problems.

The three points which stand out most clearly during the past year are (1) Education, (2) Professional Relations, (3) Practice of the Various Cults. Our members are keenly alive to these factors which govern them from day to day. Some questions, which it would seem should be regarded as belonging to the past, are still coming up in the life of our members, particularly of those in the smaller towns and rural districts.

(1) EDUCATION. I believe that there exists today as never before a genuine desire for the advancement of medical knowledge. The example set by one of our constituent societies, here in Muncie, has been a brilliant one for all medical organizations. A society in one of the medium-sized cities of our state has organized and carried through a program for the past few years which might well be found in the largest cities of the country. To them have come, from various parts of the country, leaders of professional thought and teaching, bringing modern ideas of diagnosis and treatment. Other societies over the state have made a beginning of similar courses of study. The interest in this during the past year brings up the question if there could not be arranged through the state secretary's office a plan of cooperation in this

work. It might be possible to have a speaker spend two or three days or more at frequent times, and several societies working in consonance could profit by his presence.

Again, could it not be possible for the State University of Medicine to arrange for lecturers to make periodic tours of the state? The various colleges of the country conduct community courses in the towns in their neighborhood one afternoon a week for a certain number of weeks. This plan might be worked out in a medical way. It would be more adaptable perhaps to group the state as it is now divided and have district meetings. The course as carried out at Central Hospital this fall is such an example. One almost is envious of the opportunity the men in Indianapolis have of hearing the subject of neurology covered in this systematic method. If this plan, which has been followed so successfully in the past, could be adapted for other parts of Indiana, it would afford the profession an opportunity to be instructed in subjects which to so many are now abstruse. Could not other branches of medicine also, such as internal medicine, pediatrics (including infant feeding, or general dietetics) be carried throughout the state?

I believe that such problems should be worked out by the profession itself. Certainly they should receive the support of it. It is possible that such law as the Sheppard-Towner act was inspired and has been placed on the statute books because of the unconscious lack of interest of the medical profession in the care of the expectant mother.

The subject of pediatrics today is vastly different from that of fifteen or twenty years ago. The teaching is different, the thought is different, yet too many of our members turn to Borden's Evaporated Milk, to Horlick's Malted Milk, to Nestle's Food and other such foods as soon as it becomes necessary to institute artificial feeding. The subject of "summer complaint" or infectious diarrhea is no longer regarded as it was a few years ago, yet the great majority of practitioners cling to the old thoughts because they do not know the modern treatment.

It is through neglect of itself that the medical profession sees the invasion of its rights by

*President's address delivered before the Indiana State Medical Association, Muncie session, September, 1922.

the laity. If such an act as the Sheppard-Towner Act can be enforced, why not other provisions governing other phases of medical life? I regard the proper training of the physician as the one agency to overcome such conditions. It is disheartening to see libraries long out of date, and yet there are too many of these. How many times has this wail been sounded in the past twenty years, yet our members have written and spoken to me during this past year, and have desired that this be brought up in our state meeting for consideration.

(2) PROFESSIONAL RELATIONS. In the past fifteen years it has been a matter of interest to notice the rise and fall of certain of our constituent societies. As in the past, and as it will probably be in the future, the personal idea predominates, and not the professional. As the next session of the legislature approaches it will be necessary to secure the support of our members on certain measures, yet how many will continue to be Republicans or Democrats and not doctors. The provisions of the medical practice act apply to no party, yet men fail to help out by their letters, telegrams or personal word. Certain sections of the statute might well be strengthened. There will be great need for personal endeavor.

The constituent societies are urged to take more interest in their programs of professional relations. The faults of fee-cutting and low prices are surprisingly prevalent, and, as one of my correspondents stated, "the city men do not know how extensively this is done," neither are they concerned—they have their own problems, but they can aid by their influence.

(3) THE PRACTICE OF THE CULTS. There has been no question so widely discussed in person or letter during the past year as this one. Largely due to the advertising skill of one cult, there is great misunderstanding as to why it flourishes. I desire to make clear a few points in the development of these cults.

There are, all together, about thirteen or fourteen different recognized schools or cults of healing. We have seen the coming of the vitapaths, naturopaths, mechanopaths; we have witnessed the rapid rise of the chiropractor; we are now seeing the start in our state of the latest, the napropaths, and doubtless there will be many others. It is perhaps not known to many that recently in one of the counties of the state a prosecuting attorney obtained a grand jury indictment against three irregular practitioners, and at the trials, in spite of favorable instructions, the jury rendered a verdict of "not guilty". Regardless of the evidence and admissions the jury, by Indiana law the judge of the fact and the law, still rendered their verdict in favor of the defendants.

Now why is this? Why does the layman support the irregular practitioner? As a matter

of fact he always has and always will. From the earliest days, there has been the antagonism between the recognized, regular physician and the irregular, supported and maintained by the public. It has always been a fact that the regular medical profession is built on a scientific education, a systematic structure, in orderly progress, of all the branches pertaining to a medical education. The cults represent a rebellion at this progress, making a short detour to get into the path of easily earned money.

Barnum said truly, "The public likes to be fooled". We realize this when we see in this day of progress people seeking a "faith-cure" doctor. During the thousands of years disease has been regarded as evil spirits, as the various "humours" which have entered the body. It is not surprising that the thin veneer of civilization still retains a part of the mysticism which pervades humanity. The conception of disease is one which each individual regards as in his own understanding; otherwise, why do we have the Christian Science movement? Later to counteract this, the Emmanuel school, which was to be a part of medicine to treat the neurotic by the power of thought; the various schools which teach that disease is due to the pressure of the vertebra out of alignment; to impingement on the nerves; or as the napropath now claims, to the fact that the "ligaments are too tight" making pressure on the nerves. The bonesetter adjusts; the chiropractor adjusts; the pilgrim goes to the various churches to receive a bath or the laying on of hands, and goes away "cured". Is it not a fact that any layman is ready to make a diagnosis or offer treatment, or urge a "change to a different doctor"? Perhaps this lack of faith in the medical profession has been developed by our own lack of complete attention. In fact, the desire to be sound and strong is the strongest feeling of the individual, and from that comes the groping and wandering in the effort to attain that desire. Lovett of Boston has lately, in a scholarly and fascinating article, traced the rise of quacking, myrical healing and medical cults; and Frothingham, in the *Atlantic*, recently has discussed these various cults.

It is curious that with the advance of science we have, almost in our generation, seen the fall of a few branches of healing—homeopathy, eclectic medicine, osteopathy—all flourished, then subsided. Why? Because of education. As the newness passed away and they were judged by results it was seen that the basic principles had been ignored and as the education was broadened to meet the need, it approached that of the regular school. Even today the latest, osteopathy, has included in its instruction courses of study which were once derided, and we find that their schools are ranked with those Class C schools, according

to the American Medical Association classification. It would be interesting to trace still further the paths of the irregular cults, but time is limited.

There has been much criticism of the State Board of Examination that there has been no prosecution in an attempt to rid the state of these irregular cults. Is it possible to enforce a law if there is no public sentiment upholding it? In California there have been more convictions than in any other state, yet they still flourish. The whole problem resolves itself into one of education, both on the part of the physician and of the public. The strongest argument we have is that statement made "that scarcely any chiropractor could be found who was a high-school graduate". Publicity as to lack of education, both preliminary and professional, will accomplish far more than prosecution. This means that we must devote more time to calm discussion with the laity and show that salesmanship and advertising do not in themselves give cures. The general public does not understand, and many physicians also.

The law, as it stands today, discriminates in favor of no school; it states what must be the basis for one to engage in the healing art in this state. A license is not a recognition of a school; it is merely a permit to engage in healing, and each day that an irregular practitioner engages in his work he is violating that law. Public sentiment is not upholding this law, and is ever ready to view the medical profession with distrust if it attempts to enforce it.

There is need for us to show the laity what the healing art is; what disease is; how it acts; how it is relieved; and how the public suffers from lack of proper attention. The patient with carcinoma of the breast or of the uterus is adjusted until the disease has become inoperable; the patient with incipient tuberculosis is allowed to become bedfast before a true diagnosis is made—then, and only then, can a sentiment be created in that circle which demands proficiency.

I believe the time has come for this association to be more active in its work. The public is eager for knowledge along the lines of true medicine. Our guest, Dr. Evans, is today doing a splendid work, and presents the best thought in his daily columns. There are other writers who have their articles published by syndicates—yet they do not reach the mass of the people in our state. A systematic campaign can be put forth by speakers or by the press. Any work along this line should come from this association, through its secretary. When the Indiana State Medical Association created the office of Executive Secretary (which was later abolished) it had some indefinite idea of this kind. With the proper man working as an assistant to the secretary, I believe this idea

can be developed until a real service can be given our citizens.

During the next few months our members will be called upon to give their services for the good of the profession. With the demands for licensing boards to lower the requirements of practice; with opportunity to strengthen the present law, I feel that our members should stand together, not as members of political parties, but as protectors of public health, and when called upon, lend their best work in selection of lawmakers who will aid medical progress.

THE TREATMENT OF CARCINOMA OF THE UTERINE CERVIX*

STANLEY A. CLARK, M.D.

SOUTH BEND

In a consideration of the treatment of carcinoma of the cervix, one enters at once into a realm of uncertainty and conflicting opinions. Where such doubt exists as to the proper course to take, it is well for one to collect a mass of testimony, and by analysis attempt to determine where the preponderance of evidence lies.

Carcinoma of the cervix is a very common neoplasm, and the larger clinics are able to present records of hundreds of cases, but the percentage of unquestioned cures is so small that one doubts the efficacy of treatment at all. This is in marked contrast to the palliative effects of treatment of this condition. The treatments which will be considered briefly in this paper are surgical removal, the so-called heat treatment, and radiation.

The surgical extirpation of carcinoma of the cervix has been extensively and more or less radically employed for the past forty years. Proceeding on the theory that cure could be obtained if complete extirpation were made, the thoroughness of the operation was extended until the operative mortality prohibited any further extension, and yet the percentage of cures from these radical operations remained discouragingly low. The literature in the past year contains few opinions favorable to the continuance of these radical operations. The most notable example of such an opinion is that of Farrar Cobb, who states that of 60 radical abdominal hysterectomies performed for moderately advanced cases of carcinoma of the cervix, there were at the end of five years a percentage of 57.1 cures. This percentage was obtained with a 11.6 percent operative mortality. Could such a percentage of cures be obtained by the majority of surgeons, certainly there would be no reason for accepting any other method of treatment which we have at hand today, but a note of pessimism is found constantly in the reports

*Presented before the Section on Surgery of the Indiana State Medical Association, Indianapolis Session, September, 1921.

of the greatest surgeons, and it is fair to assume that the results obtained by the average surgeon are much less satisfactory than those obtained by Cobb.

The use of heat in varying degrees by means of the cautery has likewise failed to enlist much support. It doubtless is of value, and it is probably more efficacious in connection with one of the other methods.

During the past five years the attention of the profession has been drawn more and more to the use of radium therapy notwithstanding the fact that the early results obtained were based almost exclusively upon the treatment of hopeless or inoperable cases. Encouraged by the marked regression in nearly all cases, even in those which were very advanced, the use of radiation has been extended to the more favorable types with a corresponding increase in the number of apparent cures. The reports from the larger clinics are so favorable for radiation that the question is now acute as to whether carcinoma of the cervix should be considered a surgical disease. This question applies likewise to the early cases as well as to those moderately advanced.

The low percentage of cures following operative removal must be due to failure of total extirpation of the primary growth, or to the fact that metastasis has occurred before the time of operation. The writer has found that metastasis occurs in some of these cases although clinically there is no reason to suspect such extension has taken place. This metastasis frequently occurs in the spine, the pubic bones, or in the femur, and if radiographs are made of these parts systematically, prognoses will be much more accurate and the course of treatment may be directed more intelligently. It is unfair to the patient to submit her to prolonged irradiation or to an exhausting radical operation for carcinoma of the cervix when at the same time she has carcinoma in some distant part.

It has been the custom of many surgeons to employ radium as an adjunct to operation, reasoning that the effect of the radium might in some way extend beyond the limits of even the most radical surgery. The writer believes there is no such middle ground, and that at least the majority of cases will fall into one class or the other; either surgical extirpation can be performed safely and completely, or the case is one for radiation. Pre-operative radiation with radium in the cervix is likely to be of little value for the reason that the destructive effect upon the cells is profoundly greatest in the tissues closest to the source of radiation. Hence, if the destructive effects be obtained in tissues remote, certainly the proximal cells will be destroyed; or if the proximal cells be not destroyed, certainly the remote structures will not be affected and the knife must in the end invade

the affected area. The carcinomatous cervix is an ideal receptacle for the radium tubes or needles, its structures affording sufficient filtration to protect surrounding essential organs. For this reason postoperative radiation is much less effectual than primary radiation. The cautery, when used to destroy a large mass projecting from the cervix into the vagina and to produce a crater-like excavation of the carcinomatous cervix into which can be placed the radium, has been found to be very beneficial.

In mentioning the use of the cautery, let me refer to a statement made by A. J. Ochsner, in Boston last June. He said that while he had been using the actual cautery in cases of carcinoma of the cervix for many years, he had gradually lessened its use during the past four years since he began to have his cases of carcinoma of the uterus treated with radium, and that in the past year he had not operated upon a single case of carcinoma of the cervix. These patients had all been treated with radium. He stated that his reason for doing this was that he found many cases in which there was glandular involvement far beyond the reach of heat. In some cases that seemed incurable the patient remained well for many years, some as long as twenty years. He ascribed this to the fact that the carcinoma in the distant glands were destroyed by the natural ability of human tissues to destroy the cancer microbe. Ochsner also advised against the removal of portions of tissue for diagnostic purposes. He stated that a very high percentage of his cases so treated died of metastatic carcinoma. He thought that portions of carcinomatous tissue might be safely removed for examination by means of the electric cautery.

Ransohoff, who began the use of radium treatment of malignant tissues in 1914, presents the following comment in regard to the question as to whether the radium treatment should be preceded by curettage or by the cautery: "From our observation it would seem that the results were the same one way or the other; therefore, we have definitely given up both curettage and cauterization as preliminary to radium treatment, and now we depend entirely on the radium. If the cases were chosen with the same degree of care that they are chosen for operation, I feel confident that the percentage of cures would be very large. I do not hesitate to state that in my opinion radium treatment should entirely supplant operation, not only in the treatment of inoperable cases, but also in the treatment of operable cases of cancer of the cervix."

Pre-operative use of deep Roentgen radiation through several ports of entry should be encouraged, as this method of radiation attacks the periphery of the growth, rather than the central focus, and its use is not attended by the edematous changes which occur from 5 to

10 days after radiation, and by the extensive connective tissue formation at the site of operation, which occurs later when radium is used in the center of the growth. By modern methods a considerable dose of radiation can be obtained in all glandular structures within the pelvis. In this connection I wish to quote Levin, who has made an extensive study of the action of radium and the Roentgen rays on diseased lymphoid tissue. He states that the outstanding feature of his investigation consists in the fact which he brings forward, that in the diseases of the lymphoid tissue, radium and the Roentgen ray do not act merely as a local agent which reduces the size of a tumor or an organ, but produce a general effect upon the lymphoid system of the whole organism. It is impossible to assert at present with any amount of certainty what the mechanism of this influence is. Also I quote from an article by O. Frankl and L. Amreich, of Vienna, with reference to histological changes incident to radium and x-ray treatment of carcinoma; they summarize as follows: "There are distinct differences between the direct and indirect treatment. Carcinoma cells respond more quickly to the action of the x-ray than to radium and do not show the stage marked by the swelling of the cell body. These facts induce one to advise the use of the x-ray in treating the parimetrium and the glands, while the use of radium is preferable in the treatment of the carcinomatous cervix.

If one must operate, therefore let him precede the operation by the maximum dose of deep x-ray irradiation, and let him follow his operation by radium within the vaginal vault, and a second course of x-ray.

In speaking of the use of the x-ray, I do not refer to the haphazard exposure of the abdomen to an undetermined dosage but to the carefully measured dosage applied to all sides of the pelvis.

My own observation and personal experience has convinced me that the combined use of radium within the cervix and uterus and deep roentgenization from without offers the best hope to the average patient presenting herself to the surgeon for treatment of cancer of the cervix today.

A brief review of the literature of the past year seems to confirm this opinion. The results of the combined method thus far are far from ideal, but it is the best we have to offer.

DISCUSSION

DR. GRACE LINE HOMMAN (Laporte): I was very much interested in what Dr. Porter had to say yesterday—that he was going to ask the secretaries of the different counties to present a program on the cancer problem the first week in November. I am firmly convinced that the treatment of cancer of the cervix is really a problem of prophylaxis and education.

At the Mayo Clinic about 50 percent of cases when seen for the first time are inoperable, and in my series of cases this last year in Laporte, 79 percent have been inoperable, so you see what a slim chance the radiologists have of doing anything, even with radium.

I, for one, am trying to educate every woman who comes into the office for examination. We should take the time—and it takes time—to teach every woman that it is abnormal for her to bleed between periods, or excessively during menstruation; that with such symptoms she should always have an examination to determine if there is anything abnormal. I think every one of us can stop to do that much, and that would help a great deal in the education of the public in the prevention of cancer.

Another thing I think is important—that we consider lacerations of the cervix more seriously as etiologic factors. I think a great many more women should be operated to correct this condition, even though they are going through the child-bearing period. Some may take exception to this statement, but when cancer develops more often about the time of the menopause why wait until the woman has cancer before you correct her pathology?

I have had some interesting cases this last year. Three cases of carcinoma of the fundus, inoperable for various reasons, are doing well with radium treatments. Two of these patients have now gone over a year, the fundus is very small and there is no evidence of metastasis.

I visited Bailey's clinic in New York last spring and saw some wonderful cures. I was given the privilege of examining a number of the cases and was impressed by the excellent condition in which I found a great many of them. Usually Bailey gives but one treatment. He places radium within the cervix and at the same time rays for three hours the broad ligaments and the cervix—using his bomb, which contains a gram of radium. Then the patient is allowed to go home, and as a rule that is all the treatment the case needs. I think with the improved technique and the larger dosage which many men are giving today, we shall have very much better results in the future. There is no question that radium is a wonderful palliative agent. It checks hemorrhage and discharge, and often relieves pain. In most cases the patient gains in weight and is very much improved.

DR. GEORGE KOHLSTADT (Indianapolis): The main thing that appeals to me in this cancer of the cervix is the fact that most of them are inoperable when the doctor sees them and metastasis has occurred.

Radium has been perhaps unjustly criticized because it does not produce a cure; but on the other hand, you do offer these people relief from pain and from other symptoms, with a minimum amount of inconvenience, practically no shock, and that is a great thing. Without

that the patients could only go home and die. You can at least offer palliation, and perhaps cure. The time is too short to say whether there have been any cures, but there are some very promising reports of patients who seemingly are in good health. I think the greatest recommendation for radium is the palliation it gives with the least amount of inconvenience.

DR. ALBERT M. COLE (Indianapolis): We have been having hopeful reports from many sources on the radium treatment of uterine cancer. I am especially interested in Dr. Clark's statement as to the advantages of the combined use of radium and the x-ray. I have been following this method and I believe our results are going to be better than by the use of radium alone. It is a matter largely of getting in the pelvis sufficient ray to destroy the cancer cells. Those cells, if any, lying beyond the influence of radium may be reached by the x-ray directed through the abdominal walls.

The Germans have been building x-ray machines giving an enormous output of voltage which generate rays nearly equal to the gamma rays of radium but in far greater quantities. By "cross firing" through the abdominal or chest walls they are able to reach internal cancer and profoundly influence it. They have reported some cures and some astonishing improvements. Lately these reports have been substantiated by American observers but sufficient time has not elapsed to make any positive statements. American made apparatus of similar design will soon be on the market.

Some hope may be entertained that in this new armamentarium we may reach and favorably influence internal cancer, not only of the pelvis but also of the abdomen and chest.

DR. T. C. KENNEDY (Indianapolis): We all know that the surgical treatment of carcinoma of the cervix has been very unsatisfactory.

Many surgeons are turning from surgery to radium even in the earlier cases. In a discussion of this subject before the session of the A. M. A. at Boston, Ochsner made the statement that he had not operated a case of cancer of the cervix this year, but had sent them all for radium treatment. Dr. John G. Clark, at the same meeting, said he felt convinced the time has about arrived when we shall cease to speak of any operable case of cancer of the cervix, but shall submit them all to irradiation. He says he is turning to surgery in such a small number of cases as to carry the statistics in this line almost to the vanishing point.

Laceration of the cervix, in my opinion, is not sufficient to produce cancer. There is something back of it, some lowering of the body resistance, that allows the malignant cell to grow. It is not sufficient to treat the cancer, but we must increase the efficiency of the defensive organs.

A thorough examination should be made. Frequently other organs may be involved. In our service at the Robert Long and Indianapolis City Hospitals, we have a standing order for a cystoscopic examination of the bladder to be made before sending any case of cancer of the cervix to the radium clinic for treatment.

In regard to the cure of cancer, we do not know how many we cure as it is impossible to trace many of them. From my seven years' experience with radium I am convinced that the results are far superior to any operative procedure that has ever been devised. The time has arrived when every case of cancer of the cervix at any stage should be treated with radium.

DR. O. E. SPURGEON (Muncie): I want to report two cases of cancer of the cervix that I think will be of some interest. One case was treated seven years ago by a large amount of radium. The treatment was given at three-month intervals, and she had four treatments. I report this case as of interest since she is absolutely well so far as we can tell, and I report it on account of the length of time since the treatment was begun. At the time of beginning the treatment the uterus was bound down, adherent over to the left side, and there was considerable of a mass, hard and indurated.

I also want to report another case which has also been treated now for four years. This case had applied to four surgeons for treatment and was refused. They all said she was absolutely hopeless and it would be unwise to attempt to operate. She had one application of radium, a large amount was used, and she has entirely recovered. The one dose is all she ever had, and so far as we can tell she is clinically well. This case was very far advanced. The induration was very extensive, the uterus was entirely immovable, and it seemed as though the carcinoma had invaded the bladder wall. Previous to the time she was treated the carcinoma had invaded the rectal wall and there was a rectal fistula. This still persists, but so far as we can tell the case has entirely recovered, leaving only the bad results of the rectal fistula.

DR. H. O. SHAFER (Rochester): It seems to me that if there is any question at all in our minds about whether radium will benefit a patient, we should leave it to the men who are giving radium, because if there is any question it is almost certain there will be a recurrence, and in the last two or three years I have seen enough to make me enthusiastic about radium. I do feel, however, that the cases that get an enormous dose of radium are benefited more than those who have a small dose, and perhaps a second and a third dose.

I have seen two or three cases in which it is almost miraculous what radium has done. I have seen the case which Dr. Spurgeon reported, this inoperable type that was given the

massive dose, and I have also seen one like his case two, inoperable cancer of the breast, and that case has cleaned up and the patient is apparently well. That is one hundred percent more than surgery could have offered them.

I hope cancer week will be taken seriously by every man in every county, and that a lot of these cases will come to us early enough so that radium can be given. I feel it is an uncontrovertible fact that in the treatment of carcinoma in conjunction with surgery radium should be used early and the treatment kept up.

DR. STANLEY A. CLARK (closing): I hardly felt that this section would be particularly interested in the question of technique, so I left that out of the paper. My experience has extended over about two years, although I have been watching radium for a longer time, particularly because my experience with surgery was so unsatisfactory and my colleagues said their experience was of the same character. I think we all agree that as these cases come into our offices it is almost useless to operate. We have a condition which we are pleased to call the pre-cancerous state of the cervix, in which we have been advising operation, and in the past we have operated a number of these, and in none of these which we operated did we find any cancer cells. I feel that in these cases the radium will give these patients as much protection from cancerous tissue as is necessary.

The question of whether this dosage shall be given in one large dose or in several smaller doses repeated is of course still unsettled. When they began the use of radium there was no guide. The dosage varied, and there were many unfortunate sequelæ, as fistula of the bladder, rectal fistula, and of course all these bad results were laid at the door of radium.

The histology of the changes which result after the use of radium or the x-ray in the treatment of cancer is somewhat enlightening. I mentioned the extreme edema that occurs in the tissues after radiation. Surgeons who have operated cases of carcinoma of the cervix know that eight days after the operation extensive edema is produced. It was at one time maintained at the Mayo Clinic that we should operate at that time. They found it undesirable and gave it up and began to operate later. But I feel that that whole theory is wrong. These cases that come to you are either surgical or they are non-surgical. If the lesion is small, if it is in the fundus, or if it is frankly very early, such a case is probably best treated surgically. But these are in the minority. The cases that have gone beyond this stage are not surgical and they never become surgical, for the reasons I have mentioned. If the radium has destroyed the metastasis in the glands, certainly it has destroyed the primary growth, so why cut into it? The curative effect is secured with the production of fibrosis, and in any ex-

tensive cancer process, no matter how much it is radiated, you are very apt to find and if you search patiently you will almost always find cancer cells in the fibrous tissue. Any trauma of this tissue, either surgical or accidental, may liberate these cells and the cancer thus made active. They will probably start in the end anyway; that is the reason we do not cure all of these cases.

DISTURBANCES OF CARBOHYDRATE METABOLISM*

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It was the custom for many years to class every individual showing a glycosuria as a case of diabetes mellitus. The condition was supposed to be due to a disturbed function of the pancreas, which in turn was brought about by certain sclerotic changes in the organ. Most of the cases presented the classical symptoms of true diabetes, *i. e.*, thirst, polydipsia, polyphagia and polyuria, with loss of weight and strength. Occasionally, however, cases presented themselves with a glycosuria, but without these other well-known findings. These patients often presented marked evidence of pathological changes in organs other than the pancreas. These last two mentioned facts were possibly the most important points in bringing about a classification of the glycosurias, as nearly as possible, to the etiological factor or the concurring pathological conditions which the patient might present.

The physician sometimes encounters a case which upon a single examination of the urine may show sugar. Following examinations may show an absence of sugar. This glycosuria may be due to any one of the following:

1. A large ingestion of carbohydrates.
2. Excessive mental or physical strain.
3. A disturbance of any of the endocrine glands other than the pancreas, *i. e.*, thyroid, pituitary or adrenal.
4. Brain tumors or injuries.
5. Administration of certain drugs.
6. Renal diabetes.
7. Diabetes Mellitus.

Groups one and two are considered by some men to be physiological glycosuria. Groups three and four are glycosurias due to pathological conditions. Group six, the cause of renal diabetes, is unknown.

The physician occasionally encounters a case which cannot be classified in any of the seven types just mentioned. The patient is one who, during the course of a routine examination, is found to have sugar in his urine. He upon inquiry tells us that he has not ingested a large amount of carbohydrates; nor does he have the

(*) Presented before the Section on Medicine of the Indiana State Medical Association at the Muncie session, September, 1922.

classical symptoms of diabetes. He has presented himself to the physician with symptoms which are not at all akin to diabetes. Evidence of pathological changes in the endocrine glands cannot be demonstrated. The physician may find the patient to have a mild hyperglycemia at the same time the glycosuria is discovered. Subsequent examinations of the blood and urine may show them to be normal. This patient, if given a moderate amount of carbohydrate, may again show a waste of sugar in the urine. This type of individual has been termed by some men as a potential diabetic, and it is in regard to this class of patient that I wish to place the most emphasis in this paper. In order to do so I will give our findings in several different classes of glycosuria cases, for the purpose of comparing them with the potential diabetic.

Group 1—Physiological Glycosuria. The following chart well illustrates a case of alimentary glycosuria. A medical student was chosen for this test. He was considered physically normal following an examination by an internist. He was given 100 grams of glucose by mouth. His blood and urine were examined before this administration of sugar, and at one, two and three hours following this meal. The findings were as follows:

	Normal	1 hr.	2 hrs.	3 hrs.
Blood sugar.....	87 mgms.	163	115	76
Urine sugar.....	neg.	.2%	neg.	neg.

In this case the blood sugar increased from 87 milligrams per 100 C.C. to 163 milligrams in one hour after the glucose meal; at the same time a small amount of sugar was found in the urine. At the end of two hours the blood sugar has dropped to 115 milligrams, and the urine is sugar-free. In three hours the blood sugar is normal and glycosuria is absent. This is considered by most men as a normal sugar curve; still others claim a normal individual should not have a glycosuria following the administration of 100 grams of glucose per os. We have had several cases to show sugar, after this procedure, in whom no pathology could be determined.

2. Endocrine glycosuria. S. M., male, age 31 years; height 172 centimeters; weight, 59 kilograms. Patient entered the hospital for tonsillectomy. Chief complaint: frequent sore throat; pains in the joints. Family history: negative for tuberculosis, malignancy and diabetes. Personal history: Had measles and scarlet fever as a child; frequent tonsillitis; influenza a few months ago; no history of pneumonia or typhoid. Denies a history of neisserian or luetic infection. Noticed neck "getting larger" at eleven years of age. Present illness: Since dismissal from service has had repeated sore throat with pain in the joints, confined to bed on several occasions. Physical examination: Tonsils hypertrophied and crypts

filled with debris. Remainder of examination of no relative value except for a markedly enlarged thyroid gland envolving both lobes and isthmus. Entire gland is perfectly smooth. Patient has no exophthalmus. Slight tremor is noticed. Pulse 78. Stellwag and Von Graefe both negative. Patient has not lost weight and says he is not nervous. Palpitation not noticed. The basal metabolic rate is plus 16%. This low rate was to be expected with a colloid goiter. Patient was given 1.5 grams of glucose per kilogram of body weight. The following chart shows his disturbance of carbohydrate metabolism.

Normal 1 hr. 2 hrs. 3 hrs.

Blood sugar.....	80	285	227	72
Urine sugar.....	neg.	2.8%	2.2%	neg.

The blood sugar is still quite high at the end of the two hour period, and the glycosuria is still quite marked. This does not occur in a normal individual, for as already noted the blood sugar should drop almost to normal in one hour and is always within a few points of normal at the end of two hours. This quite well illustrates the usual findings in the cases showing an endocrine unbalance. It gives us an idea of the influence a disturbed function of one gland has upon others of the endocrine system.

3. Renal glycosuria. L. C., female, age 46 years. Admitted to the hospital September 15, 1921. Chief complaint: Nervousness, "stomach and bowel trouble." Family History: Father and mother died of tuberculosis; two sisters dead of tuberculosis; one daughter 19 years of age living and in good health; no history of malignancy or diabetes. Personal History: Usual diseases of childhood with good recovery; no other serious illnesses; always nervous and easily fatigued. Present illness: In March, 1921, had a chill, high fever and pain in left chest; pain "around kidneys," frequency of urination. Had chills two or three hours each day for over a week. These chills were followed by fever. Patient had nausea and vomiting. Great amount of gas in the stomach which was relieved by eating, also relieved by soda. Appetite good, always hungry. No loss of weight. No polydipsia. No polyuria. Patient voided 1500 to 2000 c.c. of urine for twenty-four hours. Physical examination: Nothing of relative value to the case was found in the physical examination. Blood examination: Hb. 79%; R. B. C. 4,768,000; W. B. C. 8,400; Polynuclears 67%; small mononuclears 20%; large mononuclears 13%. Wassermann negative. Blood uric acid 2.1 milligrams per 100 c.c. Blood sugar 74 milligrams per 100 c.c. Urine at this time contained .2% glucose. The following day the urine contained .32% glucose. Phenosulphonephthalein 38% and 12%, total 50%.

The specific gravity of the urine ranged from 1.003 to 1.020. The urine was negative for albumin and casts. 75 grams of glucose were given by mouth and the following curve obtained:

	Normal	1 hr.	2 hrs.	3 hrs.
Blood sugar	90	100	96	78
Urine sugar21%	.38%	.24%	.22%

This case shows a glycosuria with a normal blood sugar while fasting. One hour after the glucose administration, the blood sugar content is still normal while the urine sugar is slightly increased. At two and three hours the blood sugar is still lower and the glycosuria is slightly decreased. This type of case shows little difference in the sugar waste regardless of the carbohydrate intake. Glycosuria in the presence of a normal blood sugar is diagnostic of renal diabetes. Renal diabetes is a condition over which there is a great deal of discussion. Some clinicians even doubt its existence and consider it as a type of true diabetes. The underlying pathology of the condition is not well understood. Still every one must admit that the three classical symptoms of true diabetes are most often absent. We were unable to get a ureteral catheterization of this patient to determine as to whether or not the urine excreted from each kidney would show the presence of sugar.

4. True diabetes. Every clinician is quite well acquainted with the blood sugar findings in a case of true diabetes. Hyperglycemia is to be expected as long as glycosuria is present. In fact the blood sugar content is almost always above 160 milligrams per 100 c.c. of blood while the patient is showing sugar in the urine. I do not believe a great deal of value is obtained from blood sugar determinations while the patient is wasting sugar in the urine. When once you have the patient's urine free from sugar such an estimation gives you an idea of the individual's tolerance, or the kidney threshold point. I know of several cases, while under treatment, the urine was rendered sugar-free, and the physician thought it well to increase the carbohydrate intake. In one case the blood sugar was still quite high, 280 milligrams per 100 c.c. This would surely contraindicate any increase of sugar in the diet. It means either that this patient has a decreased tolerance for sugars, or a kidney condition which has raised the threshold point.

Some clinicians make a glucose tolerance test as soon as their diabetics become sugar-free, with the idea of determining the individual's tolerance. I do not believe this to be a good policy. It simply overburdens an already over-worked pancreas and little is to be gained in the end by such a procedure.

We find no constant relation between the

blood sugar content and the amount of glucose in the urine. For example, a patient may have 6% of sugar in the urine, and only 250 milligrams in the blood; or 2% of sugar in the urine, 450 milligrams in the blood. The former mentioned type is the easier in our experience to free from sugar, but is more apt to have an early recurrence than the latter.

Blood sugar determinations are of great importance when the urine is sugar-free, for at this time they act as a guide to dietary regulation; and also give us some idea as to the effect of treatment. We cannot rely on blood sugar determinations alone because of the fact that each individual is a law unto himself as to his glucose tolerance and kidney threshold point.

Wilder classifies his true diabetics under five groups, according to the clinical and pathologic conditions encountered. He also gives the mortality rates on each class. He made a study of 298 cases presenting themselves at the Mayo clinic from January, 1920 to September, 1921. His classification is as follows:

a. Acute diabetes, characterized by abrupt onset and gradually falling carbohydrate tolerance, loss of strength and weight. Nineteen percent of the cases were of this class—most of them young people, average age twenty years. Nearly 25 percent of the cases followed attacks of influenza. Fourteen of these cases died in the first year.

b. Vascular diabetes. These cases associated with hypertension or arterio-sclerosis or both, with or without renal complications; 30 percent of the cases were of this type. The onset is insidious. The course is chronic. Ten died in the first year.

c. Diabetes of obesity. Fifteen per cent of the cases in this class. No vascular or renal disease evident, neither could evidence of pancreatitis be determined. The disease in this class of patients tends to be mild. Acidosis was found to occur quite frequently in this group. Only two deaths reported in two years.

d. Interstitial pancreatitis. Only 53 or about 15% showed evidence of pancreatic involvement, either as determined at autopsy or suggested by cholecystitis or other inflammatory processes near the pancreas. Many of the cases operated on at the clinic for different conditions had small pieces of the pancreas removed for microscopic examinations. The course of the disease is chronic and easily controlled by dietetic measures, according to Wilder. Only five deaths were reported in the first year.

e. Miscellaneous persistent glycosurias. Under this heading he has 54 cases. Five had tumors of the pancreas, fifteen had glycosuria following hyperthyroidism, five had tumors of the brain, four were renal diabetics, one had

syphilis antedating the onset of diabetes. Twenty-four of the causes he did not classify.

Wilder states that not enough time has elapsed to give definite prognoses on each class of case presented. He thinks that at least five years should elapse before any definite conclusions can be drawn. Every clinician has possibly noted these various types of diabetics, and if he would so classify and later follow them, we could possibly make some deductions which would be of value in a prognostic way.

5. Potential diabetics. Under this heading I place the individuals, who are without the classical symptoms of diabetes. Allow me again to refer to the cardinal points in this type of case. Sugar is accidentally discovered in the urine during the course of a routine examination. They present themselves to the physician for some ailment which is not at all akin to diabetes. The physician upon finding this small amount of sugar in the urine makes repeated examinations at later dates and is unable to detect sugar. He often gives 50 to 100 grams of glucose, and sugar again appears in the urine. Blood sugar examinations made upon these patients often show a mild hyperglycemia, while at the same time glycosuria is absent. Blood examinations for non-protein nitrogen, urea, uric acid and creatinine made at the same time are found to be normal. This type of case if closely supervised as to diet may not at any later date show sugar in the urine. The same cases without dietary restrictions are quite apt to become true diabetics. The following cases will represent a few of this class of patients:

D. F., male; age 32 years; occupation, grocer. Chief complaint, nervousness, easily fatigued, rheumatism. Family history: Father and mother living and well; one sister and two brothers living and well. No history of tuberculosis or malignancy. No history of diabetes in family. Personal history, measles and mumps as a child, typhoid at 13 years; influenza 1917, followed by pleurisy; some joint pains since dismissal from the army. Present illness, entered the hospital September 6, 1920. Complains of tiring easily on exertion. Notices palpitation during slight exercise. Has chronic cough which he thinks is due to excessive smoking. Has had frequent pains in ankles and knee joints for past nine months. No fever at any time. Physical examination: Patient appears undernourished. Skin appears dry. Eye reflexes normal. No exophthalmus. Nasal passages appear normal. Tonsils enlarged and crypts filled with debris. Thyroid appears slightly enlarged in right lobe. Chest: Increased breath sounds over left apex, lungs otherwise normal. Heart normal in size, no murmur. Abdomen: No tenderness over gall-bladder, pancreas or McBurney's point. Extremities: Reflexes normal. Slight tenderness of knee joints when pressure is made. Pulse 76;

Temperature 98.4; respiration 20. Urine examination, 9-7-1920—Sp.Gr. 1.022. Albumin-negative, Sugar-Neg. 9-8-1920—Sp.Gr. 1.026. Albumin-negative, Sugar-.6%. Blood count—Hb. 81%—R.B.C. 4,320,000—W. B. C. 8,600 Polys—78%; Small lymphocytes 16%, large lymphocytes 6%. Blood Wassermann—Two plus positive. Glucose tolerance test—9-14-1920.

Glucose tolerance—9-14-20:

	Normal	1 hour	2 hours	6½ hours
Blood sugar	98	110	155	not made
Urine sugar	Neg.	Neg.	.24%	.18%

 9-18/20—Blood Sugar (fasting)—77 milligrams per 100 c.c.
 9-20/20—Basal Metabolic Rate—Plus 6%.

This case shows a rise in the blood sugar content after the administration of glucose. It also shows a continued glycosuria as late as six and one-half hours after the glucose meal. This bespeaks a disturbance of carbohydrate metabolism. Some might class this patient as a renal diabetic because he shows sugar in the urine with only a slightly increased blood sugar. The patient only had sugar in the urine at one time before the tolerance tests were made. He was at this time on a regular diet and had not ingested any unusual amount of carbohydrate. This is the fact that directed our attention to him. He was dismissed from the hospital a few days after these examinations were made with instructions as to his carbohydrate feeding. The patient again entered the hospital Oct. 28, 1921. His complaint at this time was loss of weight, polydipsia, polyuria and marked weakness. His weight had fallen from 154 pounds in September, 1920, to 130 pounds at this date. Morning specimens of urine and those collected two hours after dinner were negative for sugar on October 29th and November 2nd. Patient was at this time on the usual soft diet as served in the hospital. On November 3, 1921, patient had .25% of sugar in the twenty-four hour specimen. Sugar could not be found on November 4th or 5th.

Glucose tolerance—October 31, 1921:

	Normal	1 hour	2 hours	3 hours	4 hours
Blood sugar	93	166	253	181	not made
Urine sugar	Neg.	.62%	1%	1.2%	1.5%

This shows a markedly decreased glucose tolerance to that obtained a year previously. This patient when first seen was possibly in a pre-diabetic condition. We do not believe his thyroid condition was active enough to cause his carbohydrate unbalance when he first came under our observation. His clinical symptoms and basal metabolic rate cause us to make this conclusion. When seen this last time his thyroid was more enlarged and his metabolic rate increased to plus 37%. It may be that the carbohydrate intolerance is primary in this case to the thyroid condition. The patient was last observed a few months ago. His thyroid condition appeared improved. He makes several tests of his urine each day and it remains sugar-free as long as he carefully observes his diet.

The three following cases we were not permitted to study with so much detail as they were out patients to the hospital and only came in for laboratory examinations:

Mr. C. D. Age 32 years; machinist; weight 168 pounds. Seen October 21, 1921. Six months previous to this date the patient had been to the Mayo clinic where he was diagnosed as a case of chronic appendicitis. He refused operation. While at the clinic, and on regular diet, sugar was found in his urine. The patient's father was a physician and instructed the son to make his own urine examinations for the detection of sugar. These were repeatedly negative except on one occasion. The patient was eating whatever food he liked, omitting sugars in excess. On the date seen by us his urine was sugar-free in both morning and 2:00 p. m. specimens. His twenty-four hour specimen was also negative for sugar. His blood sugar was 160 milligrams per 100 c.c. He was cautioned against eating so much carbohydrate, and he promised to limit himself more closely. January 30, 1922, his three urine specimens (twenty-four hour, morning and afternoon specimens) were sugar-free, and his blood sugar was 152 milligrams per 100 c.c. On March 31, 1922, his urine was still sugar-free and his blood sugar down to 100 milligrams. His diabetes is arrested. He was unquestionably a potential diabetic.

Mr. E. C. H. Age 52 years; traveling man; weight 154 pounds. While presenting himself to a physician for a physical examination for life insurance, sugar was found in his urine. On March 2, 1922, his blood sugar taken while fasting was 150 milligrams per 100 c.c. On March 4, 1922, his urine was sugar-free, examined after a heavy meal. The physician cautioned him against the too free ingestion of sugars. The patient had lost no weight, nor did he present the other symptoms of true diabetes. Several blood and urine examinations were made at later dates as follows:

	Urine Sugar
	Blood Sugar (24 hr. specimen)
4-1-22	88 mgms..... Negative
5-6-22	84 mgms..... Negative
6-3-22	102 mgms..... Negative

This is another potential diabetic. By limiting his carbohydrate intake his pancreas, which has been overworked, has been allowed to recover its balance, and he will possibly be free from glycosuria, even when placed upon the amount of carbohydrate used by a normal individual.

W. D. A. Male; age 56 years; patient seen on May 26, 1922. This patient was sent to the laboratory for a complete blood chemistry examination and protein sensitization test. He had

frequent urticaria and a peculiar skin eruption. His blood findings were as follows. Blood Urea-Nitrogen, 15.4 Milligrams per 100 c.c.; Blood Uric Acid, 2.4 Milligrams per 100 c.c.; Blood Creatinine, 1.6 Milligrams per 100 c.c.; Blood Sugar, 153.0 Milligrams per 100 c.c.; Blood Carbon-dioxide, 69 Volume percent. In this case we notice a rather marked retention of sugar with the products of nitrogen metabolism within normal. This point struck us rather forcibly as the patient had not taken any food for sixteen hours. A morning and twenty-four-hour specimen of urine was negative for sugar. Blood Wassermann was negative. The protein sensitization test showed the patient to react to every food containing a large amount of sugar. The patient was advised to limit himself on carbohydrates and those foods to which he reacted by the protein skin test. A few days later the patient visited a very good internist in Chicago. He was told that he had a "diabetic dermatitis." His carbohydrates were reduced in his diet and his urticaria and skin eruption have disappeared. This patient may be an arrested diabetic. I feel that he should also be classed as a potential diabetic.

CONCLUSIONS

1. Any individual showing sugar in the urine needs medical supervision. If it is a physiological glycosuria it is not serious in itself. If from an endocrine condition it is not so apt to be serious in itself, and will disappear if the etiological factor can be relieved.
2. Individuals showing a persistent glycosuria may be either "renal diabetics" or true diabetics. The seriousness of "renal diabetes" is questionable, as these cases have not been studied over a long enough period of time. Diet does not influence the glycosuria in these cases.
3. Blood sugar determinations are of value in establishing the glucose tolerance of a patient, and in studying the influence of diet and medication when once you have the patient's urine free from sugar.
4. Quantitative sugar estimations of the urine are of value when made upon twenty-four hour specimens of urine.
5. True diabetics should be classified according to the etiological factor and the concurring pathological conditions. This would be of value in outlining treatment and also in a prognostic way.
6. Any individual showing an occasional positive test of sugar in the urine should have a blood sugar examination. In this way lowered glucose tolerance may be detected, and the physician has the opportunity to reduce the patient's carbohydrate ingestion. This may be the one

big factor in allowing an over-burdened pancreas to establish its balance, and in this way prevent a future case of diabetes mellitus.

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DISCUSSION

DR. B. M. EDLAVITCH (Fort Wayne): We are just beginning to obtain laboratory information of real value in this particular field, and we are practically just beginning to get clearer ideas and a better understanding of some of the clinical problems bearing on carbohydrate metabolism. Therefore, any contribution that brings out original observations along this line is well worth while. The principal point Dr. Warvel brings out—the pre-diabetic stage—is not altogether new, but this is a new field, and such a paper as this serves to bring the subject before the profession at large and helps to bring home some of the information that every medical man should have.

While most of us will agree with the doctor in the main, there are some points that justify differences of opinion. In the case of the first student who was given 100 grams of glucose, Dr. Warvel at the end of one hour found 163 mgms. of blood sugar, with 2 percent of sugar in the urine. This he considers a normal sugar curve, but he admits that others claim there should not be a glycosuria after 100 grams of glucose by mouth. I confess that I hold the latter view. I believe that a person who has a normal carbohydrate tolerance and a normal carbohydrate metabolism will not show hyperglycemia under these conditions. But there is no unanimity of opinion on this question today, and so long as we do not know the fundamental processes that underlie this question there will be ample justification for such differences of opinion.

In the second case the doctor presents there are some diagnostic features that point to a hyperthyroid state, and, on the other hand, some clinical findings that point to colloid goitre. In the presence of the practically normal metabolic rate (plus 16), the diagnosis of colloid goitre was justifiable and undoubtedly correct, as against hyperthyroidism.

The essayist is right when he says that there is no constant relationship between the blood sugar content and the amount of sugar in the urine. Because of this fact it becomes of considerable importance to find out just what has happened in the blood with regard to sugar—just as important as with regard to sugar in the urine. In order to find out what progress a hyperglycemia patient is making it is important to follow the blood sugar content at frequent intervals in order not to have to rely upon the urine sugar findings alone. The most accurate way of following these cases would be by daily determination of the blood sugar.

The doctor's final conclusion is that any individual showing occasionally a positive test for sugar in the urine should have a blood sugar examination. A blood sugar examination alone is not enough. Such a patient should have repeated examinations for blood sugar, as well as for urine sugar, under different conditions, e. g., after a full meal, after fasting, after a glucose meal, because only in that way can the physician finally come to a definite conclusion as to whether he is dealing with a case of pre-diabetes, or the so-called "potential diabetes".

DR. C. R. STRICKLAND (Indianapolis): We are distinctly indebted to Dr. Warvel for the presentation of this paper, because of the fact that quite recently diabetes has begun to come into its own for consideration and contemplation among physicians. Over 5,000 deaths occur from diabetes each year in the United States. That gives each of us a case now and then, and if we are careful in our examinations we will find many more cases as time goes on. Bringing in the carbohydrate metabolism makes the discussion of the paper extremely difficult because of the variety of things that enter into consideration.

Some years ago Allen said that there was no diabetes without pancreatic insufficiency. I think he has now partially taken that back. Diabetes is a complex, a condition rather than a disease, and the diabetic is an individual rather than the individual being a diabetic. We know that disturbances of the liver, the thyroid, the adrenals, and the autonomic nervous system will change the carbohydrate metabolism quite considerably. Postmortem reports covering 5,000 cases from Bellevue Hospital showed not many cases of pancreatic disturbance, although I believe it is not possible to have pancreatic disturbance carried so far that we would not sooner or later have carbohydrate disturbance. That means that we will have to contemplate our cases more intensively and not prescribe merely a low carbohydrate diet and let it go at that.

I agree with Dr. Edlavitch that in Dr. Warvel's case the observation might not have been accurate. I do not believe one reading is sufficient to predicate a decision as to what would be normal, any more than one reading of the metabolic rate would be enough.

I should like to emphasize one point brought out by Dr. Warvel, and that is the importance of studying the blood chemistry. I should not consider the determinations in a case of glucose metabolism complete until I had made a full blood chemistry study. We are not sure of the etiology of diabetes, although perhaps we are getting closer to it as time goes on. Possibly such things as depress pancreatic function or alter the glucose metabolism would affect the kidney function, in which case a study of

the blood chemistry would show a disturbance in kidney function.

I would not place much confidence in the blood Wassermann in diabetes. It is notoriously positive in hyperglycemia, and yet is not necessarily a syphilitic reaction. I am not sure that this is true, but it is an observation often made by myself and others.

Diabetes is on the increase. Whether Allen was right in saying that this is due to the growing tendency to replace alcohol with sugar and candy, I do not know; but the taking of sugars and candies in immoderate quantities for a time might depress the pancreatic function by exhaustion. We therefore will probably find more cases of diabetes coming on than we have had before.

That brings us to a consideration of what we call "potential" diabetes. Naturally we are not acquainted with the metabolic balance or chemical adjustment of every individual, and, since we know that present-day stress of living, particularly during postwar readjustment, is producing depressing influences on the metabolic balance of many individuals, we should most earnestly investigate every patient who shows sugar in the urine. He may have only a so-called physiological glycosuria, or he may be in one of the borderline states of what is rather properly termed "potential" diabetes. I do not believe that any man with sugar in the urine should feel free from the advice of his physician, or from diabetes, until it has been established over a long period of time that he is free of sugar in the urine. He should come in every few months for examination, in view of the fact that he may be a potential diabetic.

DR. J. T. BOWLES (Muncie): In a practice of sixty-three years I have met and treated many cases of diabetes mellitus. The treatment that I have always adopted has been this: an exclusive diet of green vegetables, milk in all its forms, cheese in all its forms, excluding meat absolutely, and also excluding the more powerful carbohydrates, potatoes and sugar. I have two cases under observation now in Muncie, extremely bad cases that would be pronounced hopeless by the majority of physicians. I was called in to one case when the body was covered with furuncles and the polyuria was extreme. I put this patient on green vegetables, cheese, milk and eggs. I also give her citrate of soda every three hours, with five drops of specific jaborandi every three hours. I have had this patient under observation for six weeks, and last Sunday morning she was able to get up and get breakfast.

In all cases where I find sugar in the urine I put them on this treatment, and nearly all of them have recovered and have died of some other disease. I do not remember treating a case that has died from diabetes.

DR. ALLEN HAMILTON (Fort Wayne): Both the essayist and Dr. Edlavitch spoke of the difference of opinion on blood sugar findings. There is a very marked difference in methods employed. If you follow Folin, then the results are very different from those obtained by the Benedict methods on the plasma. If the readings done by the essayist were done on the plasma, they were very low. If Folin's method was used, it was a practically normal case. There are very different results in the different methods, and the percentages are much higher in the Benedict. Folin has now changed his method so as to get higher results.

Dr. Warvel spoke of the special classification of fat cases. That only means that they may be mild cases. If the pancreas is damaged the breakdown is where the strain comes.

I think the speaker said Allen had retracted from his former position. If he has it is in such a fine degree that it is impossible to see the difference. One point Allen makes is that the seriousness in children may show a difference in function from that seen in adults. This is not seen in puppies experimentally, for they do not show this difference from adult dogs; but children may show a difference in function of the pancreas.

After you have diabetes established it makes a vast difference in the form of food which the patient is given as to whether the blood sugar will come down within a reasonable time or not. If they have overstepped their diet and have a hyperglycemia from taking carbohydrates, it will come down very easily, whereas it is very hard to get it down after fat. The present use of high fats is a return to the old Vienna teaching in this disease, but if you feed high fat you are going to get a hyperglycemia that is very difficult to get down. For a short time you can feed fat in high calories, but if it goes on for any length of time it will be difficult to bring down. After all, the feeding of diabetics is a matter of cutting down the total calories.

DR. CHARLES S. SELLERS (Hartford City): From the practical points brought out by the essayist it has been well worth our while to attempt to stop the indiscriminate diagnosing of diabetes by examination of the urine alone. It is a very serious matter to have an insurance examiner turn down an applicant for life insurance because sugar has been found in the urine. It not only has great influence on his obtaining further insurance, but is a considerable shock to the individual.

Diabetes mellitus, to be diagnosed correctly, must be studied over a long period of time. It must be remembered that diabetes is a general metabolic disturbance resulting in an individual intolerance to the carbohydrate group of foods, manifesting itself in a persistent hyperglycemia. It must be remembered also that in a normal

individual you do at times have a hyperglycemia which does not persist, but is influenced greatly by exercise and food.

I wish to place in these records a case of diabetes complicated by a lymphatic leukemia; or a lymphatic leukemia complicated by a diabetes mellitus. The diabetes was discovered about 18 months before the leukemia. Reginald Fitz of Boston reports one similar case, but was unable at that time to find other reported cases.

DR. C. F. VOYLES (Indianapolis): Before the advent of the Wassermann test a man giving no definite history of syphilis gave a history of a mild cerebral hemorrhage while yet a young man. His diabetes mellitus had resisted treatment. He made a nice recovery after I put him on mercury and potassium iodide.

About six years ago I had a case in which there was no history of lues, and a Wassermann test was a clear negative. This patient also had received other methods of treatment with no benefit, but he made a satisfactory recovery on anti-syphilitic treatment.

Personally, if I carry the responsibility of treating diabetes mellitus I shall bear in mind the possibility of lues as the etiologic factor.

DR. JOHN H. WARVEL (closing): I was not so much interested in the dietary treatment or the methods of making the blood sugar tests. The point I wished to emphasize was the early discovery of pre-diabetic conditions, as we feel that many a future case of true diabetes may be arrested.

I still believe that urine sugar estimations are equally as important as blood sugar determinations, especially if made by the method suggested by Folin and Berglund. By this sensitive test we find that the sugar overflow by the kidney is parallel to the blood sugar content. This avoids drawing a blood sample each day, and we find many patients resent this procedure.

CONSTRUCTIVE THINKING IN OUR MEDICAL ORGANIZATIONS.*

A. W. CHILDS, M.D.

MADISON, INDIANA

Ladies and Gentlemen, in calling to order this annual meeting of the Fourth District Medical Society, I wish first of all to welcome you most heartily and greet you in a true fraternal spirit. We may well congratulate ourselves on our commodious and beautiful meeting place, and on evidence already manifest of true and genuine hospitality. We are fortunate also in the work of our program committee, for as I glance over the program I note that it has not been necessary this year to go outside of the society for talent, as every feature of the program is the product of our own efforts. I do not wish to be

understood as opposed to imported instruction, for often we get valuable service from the man from without our ranks, but I do wish to emphasize the psychological fact that expression is essential to strong impressions, and when we deprive our members of the opportunity of expression in our medical societies we are depriving them of an opportunity for growth, and we are weakening our own organization. The strongest local society in our district is the society whose members are ready at any time to prepare a paper for the local or district meeting, and the weakest society is the one suffering from a sort of "parasitism" in which the most commonly expressed symptom is, "Let the other fellow do it."

The life of a society, the same as the life of an individual, is indicated by its aggressiveness, "something doing," "pushing forward," "making your influence felt," "co-operation," and "constructive thinking," and are applicable in the description of a live society, while on the other hand "lethargy," "inanition," "exhaustion," "incoherence" and "discord," are symptoms of decline.

As individuals we cling to life as the dearest possession in the world. One of the richest men in the United States says, "that he would give ten million dollars to prolong his life ten years." How precious life is to all of us, and yet we do not appreciate it till it begins to recede, then we come to realize that we are getting out of life in proportion to what we put into it, for the world pays us in proportion to our efforts, and in the coin we ask. The wealthy man gets his gold, but the man who asks for better things receives that which is more precious than gold.

The lower animals generally live from four to six times the length of their maturing period. Why should man decline in about twice the time it takes him to mature? No man or animal is old until he feels himself old. I once knew a horse which was younger at thirty than some other horses I have known at twelve. Man is not old until his interest in life is gone, and his spirit becomes aged and his heart unresponsive. Touching life at many points with a constructive and not destructive idea will keep him young in spirit. Any man who is out of touch with youth and the spirit of the times in which he lives, who is always living in the past and longing for the "good old days," and whose mind is constantly dwelling on his infirmities, is old, no matter what his years.

Now as to the application to our Medical Society, our organization is the means through which we should have the freest expression. Through it we should be able to say to the world the things we want said. Through it we should be able to control legislative bodies, and have laws enacted which will not only protect

(*) Presidential address, Fourth Councilor District Medical Society, presented at Milan, Indiana, May 16, 1922, and referred to THE JOURNAL for publication.

us but the public as well. It should be the greatest possible factor in the promulgation of health ideas and high moral standards. In other words, we as a medical organization, district or local, should have a wonderful influence in moulding the public conscience along the lines of right living and good health. But do we say to the world the things we want said? How seldom do you hear of a medical organization recommending any constructive work for the good of the community? How seldom do you hear of even one medical man appearing before the school children of his community?

Do we control legislative bodies? The laws in our own state are such that men without education and without legal and professional standing come into our communities and under the stimulus of big advertising and quackery insult the medical profession and rob the people of their right to be treated by men who have more than a financial interest in them. And yet legislators say that the medical organization is strong enough to have anything it wants in the way of legislation if it but knew how to wield its power. Do we direct the public conscience along the lines of right living and public health? Here it requires only the effort. People old and young are glad to listen to the medical man whenever he is willing to talk. A campaign of health talks in the public schools would be well received by children, teachers and parents, and recommendations from our local societies for the betterment of health conditions would be constructive work and would rejuvenate our organizations.

The most appalling situation in our local societies is the lethargy on part of its members; a symptom of old age and decay. Every physician here knows how difficult it is to get a full attendance when a paper is to be read by a local member, or when some educational work is to be put on by the state organization—constructive work—not interested—sign of decay. If there should be a funeral of one of our members we would attend. We are still alive enough to show our respect to the dead. Should we announce a subject such as: "A Death Blow to the Chiropractor," we would have a turn out, for we are interested in this particular destructive process. If we announce the subject of "Fees" a good attendance is sure to follow, for we are still alive to the calls of the butcher, the baker, and the candle stick maker. But a constructive program, even though it promises to better our condition, receives little attention in our local societies.

A recent letter from one of our state medical officials, in reference to the matter of strengthening our Indiana Medical Practice Act, says: "This has been attempted at each recurring session of the legislature for the past sixteen years,

but on account of the well organized opposition put up by chiropractors and the *lack of an organized effort on the part of the profession*, we have been unable to get by with anything proposed to amend the law by the law-abiding physicians of the state. It is a sad commentary upon the intelligence of the legislative branch of our government that it lends listening ears to the violators of the medical law. This can only be accounted for because of the lack of uniform action of the law-abiding physicians of the state." Here is the admission on the part of a medical man at the head of the procession that the illegal man is organized for constructive work, and the legal medical man is unorganized, which means destruction. Our organization is large and portly and it is time honored. Possibly we are suffering from an accumulation of adipose tissue, common to senility.

A state legislator in commenting on the statements of this letter says: "That it is not a sad comment on the intelligence of the legislative branch, for the legislator must consider all sides and it is his business to try to make adjustments between the opposing parties which will be satisfactory to all." He laments the fact that the medical society is so poorly organized and seemingly so little interested in what they want, while the opposing forces are martialed and trained like an army and have a definite point of attack. He says that when there is a bill before the legislative body that concerns the chiropractor and the M. D. a flood of letters from chiropractors all over the state come to their respective legislators urging them to favor their side of the question. While from the M. D.'s there come a very few.

Another situation which must be recognized is the fact that while the medical men have been sleeping the chiropractor has "adjusted" himself and his "adjustments" into the hearts of the people, and from this anchorage he will be hard to dislodge. Whether we like it or not we must stand by and watch our patients go to him for treatments, and sometimes we have to hear how they have been benefited. We say it is a sad comment on the intelligence of our patients, but often the best educated people are the ones who go, and they don't ask our advice, and some come away singing the praises of the chiropractor. A representative woman, of good degree of intelligence, said to me, "The chiropractor is delivering the goods." Another said, "I doctor'd so long with the M. D.'s, so I just decided to try the chiropractor, and he has helped me." Sometimes they say "he has done me no good," but which ever that may be, the fact is that we, because of our lethargy for the past sixteen years, to the strength of the Medical Practice Act, have allowed the chiropractor to come in and try his experiment and as a result he has

become established. Now, what is the situation? The chiropractor has a foot-hold. The medical man is fighting him personally, and thus helping to advertise him, but is indifferent to the legal control of his business. The chiropractor advertises, the medical man does not, and often fails in the application of the principals of good salesmanship. In the face of all of this, can we, simply because of our long standing, and time honored respectability, hope to hold the laurels? Can we dare to hope that the legislative bodies of to-day will frame up and hand us just the legal protection we want when we are not united on what we do want, and make no united effort to get anywhere?

But the chiropractor is not the only culprit. There are the traveling specialists who come into the community every few weeks, such as the Spanish Specialists, whose specialty seems to be all the diseases of men, women and children; also the street corner vendors, with their healing balms and concoctions, and many patent medicines, etc. All of these inroads into the field of medicine need consideration, but just what should be done in individual cases is not within the realm of this paper. I am simply trying to make a diagnosis and expect to leave the treatment to more experienced hands. However, I wish to refer to a few suggestions from a letter from W. S. Campbell, M. D., president of the Standard Laboratories, who was asked what to

do about the traveling specialists referred to above. He mentions the Sullivan county close communion organization as one solution, also he says sometimes it is better to give the calf plenty of rope and allow it to hang itself. In his letter he emphasizes the fact that the object of any fight should be the protection of the people rather than damage done to the profession.

There seems to be no legal way to handle these and many other difficulties constantly coming before us, and since undoubtedly the medium of the law is the correct solution, better legislation is the thing for which we should strive. A get-together program should be inaugurated and promulgated throughout our district, and we should not cease in our efforts till we have every physician enlisted in his local society, and every society in the state working for the common good. Let us get together for better legislation and help to enact better laws for the protection of the people. Let us get together for better health, and a higher standard of morality in our community. Let us get together men, socially and spiritually, and learn to love each other more, eliminate our petty professional jealousies, and break down the factions that divide and weaken us. Let us get together on constructive work, realizing with Browning, "that progress is man's distinctive mark alone, not God's and not the beast's. God is, they are; man partially is, and wholly hopes to be."

CONGENITAL DISLOCATION OF THE HIP

Henry Bascom Thomas, Chicago (*Journal A. M. A.*, Feb. 4, 1922), reviews his results in the treatment of dislocated hips. In all, there were forty-four cases and fifty-six hips. Twenty of these cases, or twenty-six hips—the condition being bilateral in six cases—were those of patients 6 years of age or older. In this series, eighteen operations were done. Reduction was effected in five cases, in one of which the dislocation was bilateral. One hip was redislocated because of the development of trophic changes. Eleven hips (seven cases) were not treated because the prognosis was too unfavorable. One hip remained out, as attempts at manual reduction failed and the open method was not tried because the muscles were too tense. One hip is marginal. In another case the result is questionable. The results in seven cases are not yet known. In none of these cases was the machine or reducing table used. There were twenty-four cases of patients under 6 years of age. In six of these the dislocation was bilateral. Therefore, these cases included

thirty hips. Forty operations were performed. Fifteen hips were reduced with a fair to good anatomic result and good function. The parents were pleased. Three hips remained unreduced and the patients did not return after release from the cast. In two cases the dislocation recurred. One of these patients has a fairly good function. In two cases the result is questionable. The results in six cases are not yet known because only the index card was found. In one case of bilateral dislocation the anatomic results are perfect and function is good but the patient limps slightly when fatigued. The five cases in which the hip is still out, the two cases in which it is marginal, and the two cases in which the results are questionable should not be regarded as failures, perhaps, because, as the patients are still under 6 years of age, the prospect of a successful result in another attempt at reduction is at least fair.

It is urged that all those who have had experience in the treatment of congenital dislocation of the hip make a detailed report, thus aiding in establishing standards of management which cannot fail to improve our results.

**THE JOURNAL
OF THE
INDIANA STATE MEDICAL ASSOCIATION**

Devoted to the Interests of the Medical Profession of Indiana

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Office of Publication, 406 W. Berry St., Ft. Wayne, Ind.

OCTOBER 15, 1922

EDITORIALS

SURGERY IN CARDIORENAL DISEASE

That longstanding focal infections play an important role in the production of cardiovascular renal disease is generally accepted throughout the medical profession. It follows that removal of such foci as a preventive measure is always indicated. Similarly the advisability of removing such primary foci as a curative measure in cases already established can scarcely be questioned—at least as a general working rule. On the other hand, cardiovascular renal disease once established is a progressive process independent of the primary focus of infection. Just as the chronic multiple arthritis which arises from long standing tonsillar infection soon reaches a point where the several infected joints may themselves act as "feeding foci" and the arthritis spread therefrom in spite of tonsillectomy, so it is with the degenerative process known as cardiorenal disease. Tonsillectomy in widespread chronic arthritis of tonsillar origin is still indicated, it is true, and usually proves of material benefit even in advanced cases. There is a point, however, at which such cases should not be operated merely because the general conflagration has dwarfed the importance of the initial blaze into insignificance. Cardiorenal disease analogously reaches a point in its development at which renal degeneration is beyond material benefit, regardless of operative procedures directed against the focus where the original infectious process arose. Such operative procedures are not productive of material benefit under such conditions, and because of the risk attendant upon all surgery in such cases are distinctly contra-indicated. The surgical risk itself is not the strongest contra-indication because it may fairly be argued that such condition will inevitably progress to a fatal issue unless "something is done". The most potent argument against surgery in advanced cardiorenal disease, regardless of the surgical objective, is that the inevitability of its fatal issue will not be altered one whit thereby. Repression is infinitely more difficult than "doing something", but in such cases is infinitely more advisable and somewhat less hazardous.

CANCER WEEK

The American Society for the Control of Cancer, stimulated by their experience last year, are going to put on another "Cancer Week" throughout the United States and Canada, November 12th to 18th, inclusive. All agencies are to be utilized in the endeavor to get their message to the people. Short talks will be given before lodges, clubs, churches, industrial bodies and at the theaters. At the latter places also moving pictures and legends instructive in character along this line will be shown.

The cancer mortality is appalling and is increasing. There are more deaths from cancer every year than occurred because of our two years' participation in the great war. The annual toll of destruction from cancer far exceeds that from many common diseases like typhoid, scarlet fever, diphtheria, etc. It causes one out of every ten deaths after the age of forty in this country. Among women of forty and over, one out of every eight deaths is due to cancer. It is estimated that we can save, through ten years' work in cancer education, thirty thousand lives annually in this country.

We hope to carry this cancer message to every community of five hundred and over in this state, but to do this we need the help of every doctor in Hoosierdom. Information, literature and speakers may be had by addressing either Miles F. Porter, Carroll Building, Fort Wayne, or T. C. Kennedy, Hume-Mansur Building, Indianapolis. The Society in this state also owns the films of the Reward of Courage, which is an interesting and beautiful picture and one which teaches a very important cancer lesson. The Society will be glad to loan these films to communities desiring them, without charge save for transportation.

**PUBLIC HEALTH WORK AIDED BY
FISH**

As an indication of the valuable work being done by the Rockefeller Foundation it may be noted that as a result of the activities of the Foundation the yellow fever outbreak on the Pacific Coast of South America was checked through the discovery and use of fish to devour the eggs and larvae of the mosquito. The usual methods of preventing the breeding of mosquitos was ineffectual inasmuch as the people failed to carry out the well-known precautions. Efforts to keep water containers covered were equally unsuccessful. Finally it was found that by distributing fish, two to four small fish to a container holding ten to fifteen gallons of water, the problem was simplified by about 75 per cent, with a lower resulting mosquito index than had been possible to get in any other way. The

distribution of 750,000 fish conquered the epidemic.

It is interesting to note that in malaria control as well as in operation against yellow fever, fish are now playing a most important role. In the southern part of the United States fish are being extensively used to control the breeding of the malaria mosquito. In some localities, even though drainage and oiling is practiced, the employment of fish to destroy the mosquitos is the chief or even sole reliance. In a group of five counties in Alabama practically every farmer has convenient access to a minnow hatchery from which he is able to stock breeding places with fish as occasion arises. The city of Richmond, Virginia, has stocked all its fountains, reservoirs and lakes with minnows and has established hatcheries to furnish the fish free of charge to any communities in the state that want them.

An interesting phase of the work is indicated in the fact that in fighting yellow fever, malaria, hookworm and other diseases in communities where the people heretofore have been ignorant and lax in adopting measures for the prevention of disease, there has been stimulated a general interest in the promotion of public health, and now the health officers, public health nurses and medical men who are spreading public health propaganda are welcome.

A. M. A. TO COMBAT SOCIALISTIC MEDICINE

THE American Medical Association, the parent of all of the reputable medical societies in this country, failed to heed the handwriting on the wall concerning many uplift schemes that threaten the destruction of the medical profession as a profession until forced to do so by the great wave of opposition to the do-nothing policy which has prevailed for some years. Those men in the medical profession who have been asking that something be done to save the profession from State Medicine and a lot of other things that work to the profession's detriment were accredited with being alarmists and even disturbers of the quiet serenity of the great parent body that continued to slumber on under the guidance of a few leaders who, secure in their professional or economic berths, have been inclined to believe that every one else is as secure as they are. Fortunately the tide has changed and now the A. M. A. is inclined to listen to the warnings that have been freely given for several years but of which no heed was taken. Now the Association is inclined to get busy in an attempt to stem the tide of adverse public sentiment and even legislation which threatens to abolish private practice entirely through the advent of State Medicine of one form or another.

The ignorance of the public concerning medical questions, and ignorance that was perpetuated because of the silence of medical men who should have been moulding public opinion, is to be corrected through the medium of a medical journal for lay people to be published by the great American Medical Association. There also will be established in Washington a legislative bureau, in charge of capable representatives, for the distinct purpose of bringing pressure to bear for the securing of wise and beneficent medical legislation as well as preventing legislation that threatens to be vicious. This same bureau will keep the medical profession of the United States posted as to what Congress is considering in the way of medical or public health legislation. It is expected that the American Medical Association through a legislative committee also will keep in touch with legislative affairs in the several states and give aid and counsel to state medical associations in securing wise and beneficent state legislation or in preventing the passage of obnoxious medical laws.

This is something that should have been done long ago, but the short-sighted leaders of our medical profession evidently have considered that it was beneath their dignity to have anything to do with politics, though every one but the doctor knows that the only way to accomplish anything in the way of legislation is to get into politics and work the game just as other interests work it in order to secure the desired ends. It may offend the dignity of some doctor to ask him to take a hand in politics, but if he desires to save his profession and his own vocation he will have to get into politics or get a representative that will do it for him and do it well. Then there are uplift schemes, innocent appearing on the surface, which deserve to be "swatted" by the medical profession, and especially by the American Medical Association. These schemes are too numerous to mention, but in passing we may mention the Sheppard-Towner fiasco, the iniquities of foundation control of medical education and experimental medicine, the control of medical policies in hospitals and other public and semi-public institutions by lay persons or organizations, bureaucratic medicine, and lastly, the aggressiveness of public health officials in their efforts to usurp the place of the general practitioner of medicine. All of the Utopian but impractical schemes that we now are fighting mean, if they are adopted, that not only will the private practice of medicine be abolished but we will have bureaucratic medicine with all of its ills, and a distinct lowering of the standards which prevail at the present time through the loss of incentive for capable men to enter the medical profession.

The battles we are waging and will have to wage in the future do not wholly concern the

welfare of the physician himself, but have to do with the welfare of the sick and disabled people of this country who are suffering now from the effects of sordid greed and quackery. These ills from which the public suffers are brought about through the apathy and indifference of medical men who have failed utterly to educate the public along right lines concerning the privileges and restrictions which should encompass all that pertains to the healing art. We have been a long time waking up to the dangers that threaten and it is an encouraging sign of the times when the great American Medical Association takes cognizance of the situation and attempts to remedy evils by belated action.

SOCIALISTIC TENDENCIES IN MEDICINE

In recent years, under cover of promoting the welfare of society or of some part of it, James A. Gardner, Buffalo (*Journal A. M. A.*, Aug. 12, 1922), states that many so-called reforms have been inaugurated which, in reality, are little more than the outcome of the emotional desires of restless faddists or of the ideas of extreme and radical discontents. The contention is sane that all reforms of whatever nature should be made only after patient and scientific investigation of the causes and the cure of the evil sought to be corrected, and that the desire to bring about such reforms presupposes knowledge obtained by serious investigation and careful research, unhampered by emotion or prejudice. The field of medicine has been a fertile one for the agitator and the propagandist. Reformers and uplifters have been allowed to invade, unopposed, the practice of medicine and surgery, until the time has arrived for raising the danger signals. The peril of the situation becomes more urgent when it is realized that the public is being educated to believe that the socialization of the medical profession will bring higher standards of health. The fact is that, with the initiative and individuality of the physician removed, the profession will cease to attract to it men of energy, ability and ambition, who are now keeping American medicine in the front rank of intellectual and scientific achievement. Prevention and education need the aid of the government; but the state should not compete with individual skill and superior knowledge and efficiency in the care of those who have money to pay and so should not be treated at public expense. Public health is the musical instrument easiest for the welfare worker to play, and the softest chord is the venereal problem. It is not wise for a state to pauperize its people, nor is it fair to the medical profession to deprive it of its legitimate livelihood. The physician has always been too busy looking after the needs of his patients to give much time to his own interest. Unless he awakens to the drift of the

tide, there will soon be little inducement for a young man of real ability to enter the medical profession. The field of social welfare or social reform has developed to such an extent in recent years that it is now a recognized profession, remunerative and popular. The solution of this problem is suggested by Gardner under three heads: (1) There should be a social service, ably trained to make real and thorough investigations and competent to distinguish between the needy poor and those possessing the ability to pay. (2) There should be an awakening of the medical profession to the realization that it is equally responsible for this pauperization. There should be censorship of the services of the physician by some responsible body like the county medical society, as has been done in contract practice, so that patients able to pay should not be cared for gratuitously. (3) There should be education of the public to an understanding that if the standards of medicine are lowered through the loss of impetus and initiative in the young physician, the public will be the chief sufferer.

AND NOW THEY SEEK AN ANTI-CORSET LAW

"The organization of an anti-corset society in Indianapolis, having for its purpose the passage of laws prohibiting the wearing of corsets, forces us to wonder if we are in for a prolonged period of damfoolery, with every harebrained idiot in the land sitting in judgment on the clothes we wear, and on all our personal habits. One day we are invited by one set of cheerful idiots to wax indignant because young girls do not wear corsets at a dance, and now to become outraged because they do. With these long-haired men and short-haired women undertaking to determine the dress of womankind, critically passing on the length of skirts and the fullness thereof, making a scandal out of the use of rouge and powder, inviting a cyclone of censure because of the awful discovery that a seventeen-year-old girl carried a little mirror in her bag, and now with the plan to make it criminal to wear a corset, it is about time that common sense steps in and prevents the making of a mockery of our laws. The next move will be to make it criminal to wear silk hose—because they are associated with vamps. There are all too many half-baked reformers in this country who will never be satisfied unless they convert the women into slovenly, slattern, sloppy things, and make life unspeakably drab for all of us."—*The Fort Wayne Journal-Gazette, August 29, 1922.*

THE SMALL INVESTOR

Not every doctor becomes an investor, but some do save money which they desire to put into an investment in the hope that it will bring

an income. Few if any doctors are what are known as large investors in the sense that they have large amounts to invest. The vast majority are what are known as small investors. It is the small investor, with the desire to reap large returns from his investment, who generally gets stung by the ever present stock salesman with his glib tongue and rosy promises of great returns from investment.

"That stock is not a good one for the small investor," said a man who knows a great deal about securities. Just why the man who was well informed about stock propositions gave this advice is well to consider. Buying stock is a form of spending money for a good or a bad thing, either in a gamble or a well protected business enterprise. It is not good business for the small investor to risk his hard earned money on a gamble. Of course he may win, but the laws of chance are against him. When it comes to taking chances, risk only the money you can afford to lose.

Of course stock salesmen will tell you that the only reason they are offering their proposition to the small investor is to keep the control of the company from going into the hands of two or three very wealthy men. That may or may not be true. The important thing for the small investor to consider is, "Is the proposition safe enough for me to place my money in it?" Highly speculative propositions are a good bit like betting on a horse race: Occasionally a hundred-to-one shot goes across and wins money for the one who takes a chance, but they are so rare that few people ever make any money on them.

The small investor wants to keep before him this thought, "Suppose I need this money next week, in two weeks, a month, or possibly a year from now, what can I get from this stock if I sell it?" The majority of these wonderful "ground-floor" propositions that high pressure stock salesmen unload on the average small investor have very little value when the buyer needs the money and has to sell. The small investor has to take the loss when he needs the money the most.

It is, therefore, better for the small investor to put his money into something safe and to build it up for the future than to be using his money buying stock of get-rich-quick schemes which amounts to about the same as using money in shooting craps to win a fortune.

If the stock you are offered is not well surrounded by safety, figure out how much you can afford to lose before you buy. Then put in it only the money you can afford to lose. Learn all you can about a stock before you buy, and obtain the desired information from your banker or from a reliable and well established bond house.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service. It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

For the good of the public it would be wise to have a special licensure for specialists and grant certificates for the practice of a specialty only when the applicant proves that he is properly qualified. This special proof should not be extended to anyone who has not been thoroughly educated in the specialty selected and who has not had special practice in a medical school or in special hospitals. In no other way can the public be protected from the horde of pseudo and half-baked specialists that now infest the country. So much poor work is being done in the name of surgery that unless it is checked the reputation for surgery in general will fall into disrepute.

WELCOME State Senator Dennis Fleming, of Georgia, to the company of super-regulators. He has introduced a bill which provides that "any and all married men who shall go fishing without the consent of their wives shall be guilty of a felony, and their sentence shall not be less than five or more than twenty years at hard labor." Since the ideal of an increasing number of Americans is a state in which all things are dealt with by law, from red neckties to double negatives, we might as well hurry the movement along and acquire a government under which all citizens are standardized according to size, color of eyes and general deportment—the non-conformists being chloroformed. Then we'll know at once whether life is worth living.—*Illinois Medical Journal*, September, 1922.

IF the plan of the Indiana State Medical Association to furnish automobile insurance to its members is carried out successfully as contemplated by the report of the committee presented at the Muncie session, the cost of automobile insurance to the doctors of Indiana will be reduced about seventy-five per cent. We always have contended that automobile insurance is a

system of highway robbery, and the profits derived from that class of business are enormous as attested by the financial report of a well established company. It certainly will mean something to the doctors of Indiana to carry automobile insurance for about one-quarter of what they are paying now and, accordingly, we are very much pleased to know that the plan as outlined at the Muncie session in all probability will be put into effect.

A LITTLE knowledge is a dangerous thing. This is exemplified in the advice and opinions expressed by school examiners who look wise and pass judgment concerning conditions that they know little about. School examiners will send notices to parents stating that a child is near-sighted when perhaps the trouble is far sightedness, or perhaps the child has no error at all, or may advise a tonsil and adenoid operation or some other attention that is not indicated, and a competent physician sometimes has great difficulty in convincing the parents that the advice given is incorrect or should not be taken too seriously. If the school nurses and other examiners not qualified to pass judgment upon the needs of children merely would send notices to the parents asking them to consult a physician, and leave the matter of diagnosis and treatment to the physician, much confusion and misunderstanding would be avoided.

AT the last or Muncie session of the Indiana State Medical Association a resolution was introduced calling upon the State to abolish salaries of medical men who act as employees of the State in teaching capacities while at the same time enjoying private practice in competition with other physicians. The House of Delegates very wisely referred this to a committee for investigation, with instructions that the committee shall meet with the board of trustees of the medical department of the State University and such other persons as required to furnish evidence, and obtain full information as to the management and policies of the medical department of the University and the hospital connected therewith. The whole idea of this plan is to make the medical profession of the state fully convergent with the manner in which the medical school and hospitals connected therewith are conducted, and to bring about a closer affiliation and harmony between the Indiana State Medical Association and the medical department of the University. This is a step in the right direction and ought to result in great good for all concerned.

THE House of Delegates, at the last session of the Indiana State Medical Association, took action on the feature of the Indiana Workmen's Compensation Act which fixes the liability for

medical and surgical services in connection with accident cases to not exceed sixty days. Most of the accident insurance companies make it appear that they are responsible for thirty days only. As a matter of fact in accident cases the attending physician or surgeon should recover for *all* treatment and care necessary, no matter whether it is concluded within thirty days or ten times thirty days. The Compensation Board and the insurance companies know perfectly well that there are many accident cases in which the after care can not be concluded within either thirty or sixty days, and there is no just reason why the attending physician should be made the "goat" for the benefit of a grasping insurance company. The House of Delegates has asked that there be an amendment to the Indiana Workmen's Compensation Act so that all treatment and care necessary in accident cases shall be provided and paid for by the employers or by the accident insurance companies representing them.

TONSIL surgery is a great fad among practically all physicians of the present day, and it is unfortunate that such a very valuable measure in selected cases is shamefully abused in both conception and execution. Physicians without any training of any kind whatsoever are attempting to remove tonsils and adenoid tissue, with the very natural result of mutilating many throats to say nothing of performing the operation in instances where it is not indicated. The amusing feature of the proposition, and one that is making the public skeptical, is the fact that it is such a regular feature with some general physicians who are attempting tonsil surgery to advise a tonsil and adenoid operation in every child, that they frequently advise such operations when no tonsils are present, the child having had a tonsil operation done previously in a very skillful and efficient way. We have no fault to find with the men who attempt to do things for which they are qualified and trained, but it does seem inconsistent to talk about the incompetency of quacks and charlatans when our own brethren exhibit such a woeful lack of the training that they should have to carry on the work that they are attempting to do.

THERE are in round numbers 142,000 physicians, 43,000 dentists and 45,000 drug stores in the United States. In the latter instance there are probably three druggists to every drug store, making a total of 100,000 druggists. These professions if properly organized and working cohesively can be made the greatest factor for good in the country. No legislation inimical to the best interests of the public and the professions named could be placed on the statute books with this organization working coherent-ly. Not a home in the state or nation that is

not reached by some doctor during the course of the year; perhaps not an individual in the nation who is not met face to face and engaged in personal conversation by one of the three professions in the course of the year.

What a power if organized would be the doctors, dentists and druggists of the United States in combating medicinizing socialization schemes, schemes for health centers, clinics, compensation laws, health insurance, Sheppard-Towner Maternity Acts and in heading off Federal interference in medical practice by such menaces as the regrettable maternity bill and the other fifty-seven varieties of attempts to bring about State Medicine.—*Illinois Medical Journal*, September, 1922.

EASY MONEY

In the course of our wide reading, for the benefit of JOURNAL subscribers, one of us found, in the *Police Gazette* of July 1st, the following advertisement which we have photographed:

ANYONE : : ANYWHERE

Men or Women

You Can Easily Learn to Be a Doctor

We give you easy lessons by mail and give you a beautiful Diploma. We teach you to treat all kinds of sickness. You can open a Doctor's Office in your own home and

EARN \$5,000 YEARLY

Many Doctors earn \$5000 a year and more; some upwards of \$10,000 a year. What others are doing You should be able to do

A Diploma Gives You the Same Opportunity and is Evidence that You are Master of a Profession of Dignity, Prestige and Influence!

WE GIVE YOU EASY LESSONS BY MAIL

You can become a Doctor by only a little study in spare time at home

A Common School Education is all That is Necessary
If you desire to enter an uncrowded field.
If you want to enter this dignified paying profession.
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Merely send us your name and address and we will send you full information by mail Free, with cost or obligation. For free information, address

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2nd Floor, 4250 Cottage Grove Avenue
CHICAGO ILLINOIS
N. Y. State Journal of Medicine, August, 1922.

—*Illinois Medical Journal*, September, 1922.

SECRETARY COMBS reports that the attendance of registered members at the Muncie session was 522. By consulting the files of THE JOURNAL it was found that previous registrations were as follows: Indianapolis 1915, 646; Fort Wayne 1916, 381; Evansville 1917, 270; South Bend 1920, 425; Indianapolis 1921, 500. It will be seen that in point of size the Muncie session eclipsed any previous session held out-

side of Indianapolis, and the Association certainly made no mistake in accepting the invitation of the members of the Delaware-Blackford County Society to be their guest. There also were approximately 200 ladies in attendance at the meeting. The number of visiting ladies has been increasing of late years, and it behoves the local committees entertaining the State Association to make ample provision for the proper entertainment of them. One of the most unpleasant situations arising in connection with the annual sessions is the problem of holding the attendance for the Friday afternoon session. It was quite disappointing this year that no one of the three vice-presidents was in attendance Friday afternoon to preside over the meeting when the president was obliged to be absent. In the emergency, the secretary secured the services of President-elect Dr. Good, who efficiently occupied the chair. Vice-presidents are elected not only to honor prominent members of the profession and their constituent societies, but also for the purpose of having available at any time a presiding officer for the general meetings.

As an evidence of the trend of lay opinion, the *New York World* has the following to say concerning the chiropractic situation:

"Fair play to the public would require adequate education of chiropractors—for example, a regular medical course plus specialized postgraduate work expected of a specialist in other fields of medicine.

"In such a course many would-be chiropractors would come to the conclusion that manipulation of vertebrae is not a cure-all, whatever its possibilities.

"Fair play to the public demands that chiropractic processes should be used only by men who know thoroughly what they are doing and why. Both common sense and science deny that all ills are traceable to the spine.

"Fair play to the public demands a strict curb on a great mass of quackery masquerading under the name of chiropractic. Fair play to the public would send a substantial percentage of chiropractors either to school or to jail.

"Adequate education might develop some competent healers of a limited group of diseases from the crowd of incompetent meddlers. But, given education, it is probable most of them would cease to be chiropractors."

As the *Ohio State Medical Journal* well says. "If the public is genuinely concerned about the protection and preservation of its health, it eventually must demand of its law-making representatives that statutes be enacted which will require certain definite minimum standards for all who treat the sick in any manner whatever. These requirements might properly be set at two years' work in an approved college of arts and sciences followed by a four years' course in a standardized scientific school. It is a hopeful indication that the most clear thinking lay writers now realize that a thorough education in the fundamentals is essential in order that the public be protected from mercenary motives as well as

from ignorance. They see through the preposterous contention of the chiropractors who claim that 'diagnosis' is unnecessary."

General elections will be held next month. How many doctors have registered so they can vote and how many doctors will take the trouble to find out how their vote shall be cast in order to effect the greatest good for the medical profession as well as for the public? The average doctor bears the label of a political party, and he blindly follows the party irrespective of whether the candidates stand for right principles or not. We should not forget that the pseudo-medical cults not only have some of their own members running for the legislature but they are industriously working for other candidates who have made a pre-election pledge to help these cults. What has the regular medical profession done to find out how candidates for the legislature stand on important questions and how many doctors are taking the trouble to acquaint their friends and acquaintances with the facts? One of the leading chiropractors of Indiana, at the head of a chiropractic college, has served one term in the legislature and now is a candidate for a second term. He was placed on the ticket because the regular medical profession did nothing to prevent him from obtaining such position. He was elected once, and will be elected again because of the apathy and indifference of medical men. It is a reflection upon the regular medical profession. The pseudo-medical cults are organized, and to a man they put time, effort and money into a political campaign to further their interests. We are unorganized except for scientific purposes, and we either put no time, effort or money into efforts to uphold the principles we represent or we give such grudgingly and sparingly. We have no just cause for complaint when we are trampled upon. We get just what we deserve.

In Michigan the battle wages merrily as to whether the University shall establish a separate department of nursing which shall be entirely independent of the medical profession. The *Journal of the Michigan State Medical Society* says that some of the self-appointed leaders in the nursing profession, in discussing the subject, have said, "We are not going to take orders from the doctors and henceforth we will perform our nursing service under our own direction and not under the direction of the doctor." As we understand the plan, which, by the way, has been proposed by the Rockefeller Foundation with a one million dollar endowment as the bait to bring about acceptance, the University is to have a department of nursing which is just as distinct a department as is the department of medicine or law, and it is to operate independent

of any other department. The final product turned out by this department is to be a "super-nurse," or one who is supposed to possess knowledge greatly in excess of the knowledge possessed by the ordinary trained nurse who has had the advantage of contact with patients and members of the medical profession, though the super-nurse is not required to have any such fundamental knowledge.

As has so well been stated by leading medical men and medical publications in this country, there is little need for "super-nurses," and certainly no need for the fifty thousand proposed by the Rockefeller Foundation. We already have enough highly trained nurses to meet all of the requirements imposed by the limited amount of technical work which they are prepared to do, but we are short of practical nurses, or the kind of nurses that are of real service in the sick room, whether the sick room be in hospital or home. If the directors of the Rockefeller Foundation desire to do something worth while for suffering humanity, and along this line contemplate dabbling with the question of educating the nurse, we suggest that efforts be made to increase the number of practical nurses by several hundred thousand and thus give the sick or those that need the nurses a chance.

DEATHS

AUGUSTA STONE, wife of Dr. C. E. Stone, of Vincennes, died August 15.

JOSEPH C. PURDY, M. D., of Terhune, died August 15 at the age of sixty-eight years.

STEPHEN M. BENNETT, M. D., of New Goshen, died September 2, at the age of seventy-five years. Dr. Bennett graduated from the Eclectic Medical College of Cincinnati in 1873.

DAVID R. CARTER, M. D., of Epsom, died September 4 at the age of seventy-four years. Dr. Carter graduated from the Emory University School of Medicine, Atlanta, Georgia, in 1883.

OLIVER S. COFFIN, M. D., died at his home in Alexandria, September 5. Dr. Coffin was eighty-one years of age. He graduated from the Indiana Eclectic Medical College, Indianapolis, in 1888.

JAMES G. WEBSTER, M. D., of Colfax, died September 9 at the age of 93 years. Dr. Webster was born in England and came to this country at the age of fourteen years. He graduated from the New York University Medical College in 1864.

J. T. TRESIDDER, M. D., of Tipton, died August 28, as the result of tuberculosis, aged fifty-nine years. He graduated from the St. Louis Hygienic College of Physicians and Surgeons in 1890. Dr. Tresidder was a member of the Tipton County Medical Society, the Indiana State Medical Association and the American Medical Association.

JOHN H. BULL, M. D., of Indianapolis, died September 17 in a sanatorium at Battle Creek, Michigan. Dr. Bull was forty-five years of age. He graduated from the Medical College of Indiana, Indianapolis, in 1903, and held membership in the Marion County Medical Society, the Indiana State Medical Association and was a Fellow in the American Medical Association.

E. M. HOOVER, M. D., Elkhart, died August 25, as the result of an apoplectic stroke. Dr. Hoover was fifty-two years of age. He graduated from the University of Illinois College of Medicine, Chicago, in 1906, and was a member of the Bartholomew County Medical Society, the Indiana State Medical Association and was a Fellow in the American Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION. Patronize these advertisers, for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

THE Huntington County Medical Society held a meeting at Huntington, September 5. Dr. R. S. Galbreath presented a paper.

THE Sheppard-Towner Maternity Act has been rejected by the governor of Maine. His rejection holds good at least until the next legislature convenes.

DR. W. C. LANDIS has been appointed director of the Child Welfare committee of Elkhart League of Women Voters to succeed the late Dr. E. M. Hoover.

THE Wabash and Grant County Medical Societies held a joint meeting at Lafontaine, September 14. Dr. Herman Kretschner, of Chicago, presented a paper.

THE Kosciusko County Medical Society held a meeting August 28, at Leesburg. Dr. Paul A. Garber, of Sidney, presented a paper on "Life Insurance Examination."

RADIO medical service has been established by the United Fruit Company whereby their ships at sea without physicians may obtain advice by radio concerning the treatment of sick.

THE Sullivan County Medical Society held a meeting at Carlisle, September 13. A paper on "Tuberculin and Vaccines in the Treatment of Tuberculosis," was presented by Dr. G. C. Johnson, of Evansville.

THE Howard County Medical Society held a meeting at Kokomo, September 1. Following a dinner, Dr. B. R. Kirklin, of Muncie, presented a paper, the subject being "Pathological Conditions of the Gall Bladder."

DR. R. H. BRAUNLIN, of Marion, has purchased the office equipment and office of the late Dr. M. H. Krebs, at Huntington, and will take up the special practice of the eye, ear, nose and throat at that place.

THE Thirteenth District Medical Society held a meeting at Rochester, September 1. Dr. H. O. Shafer, of Rochester, was elected president of the society; Dr. J. N. Kelly, of Westville, vice-president, and Dr. J. A. Work, of Elkhart, secretary-treasurer.

DR. STEPHEN SMITH, of New York, died August 26, at the age of 99 years and 6 months. Dr. Smith was joint editor of the New York Journal of Medicine and editor of the American Medical Times. He was the author of several books and was a member of the Council of Hygiene of New York City, the investigations of which led to the creation of the Metropolitan Board of Health. He was instigator and first president of the American Public Health Association.

SHOULD the bill introduced by Representative Sproul be enacted a law, a reward of one million dollars is to be offered by the United States government for a successful cure of tuberculosis, cancer, paralysis, epilepsy or dementia praecox. The provisions of the bill call for the payment of the reward in ten annual installments to be made by a board consisting of the surgeon generals of the Army, Navy and U. S. Public Health Service, who would be called upon to investigate claims for any such discovery.

THE United States Civil Service Commission announces an open competitive examination for laboratory aid in bacteriology on November 8, 1922. Vacancies in the Bureau of Animal Industry, Department of Agriculture, for duty at Denver, Colo., at \$900 a year, and vacancies in positions requiring similar qualifications in Washington, D. C., and elsewhere at this or higher or lower salaries, will be filled from this examination. Applicants should at once apply

for Form 1312, stating the title of the examination desired, to the Civil Service Commission, Washington, D. C., or to the Secretary of the United States Civil Service Board.

THE Seventh District Medical Society will hold its annual meeting at Indianapolis on October 26, at the Indiana Dental College. The following program has been arranged:

Afternoon

1. President's address.....Dr. R. C. Ottinger
2. Syphilis versus Carcinoma of the Cervix Uteri.....Dr. A. S. Jaeger, Indianapolis
3. Obstetrics as Practiced in the Country.....Dr. O. T. Scamahorn, Pittsburg
4. Digitalis TherapyDr. Edgar F. Kiser, Indianapolis

Evening

- 7:00 p. m.—Dinner at Columbia Club.
 1. Functional Nervous Disorders of the Chronic Invalid"
 Dr. Hugh T. Patrick, Chicago

ALEXANDER RIGHTER CRAIG, M.D., Secretary of the American Medical Association since 1911, died September 2, at the age of 54 years. He was a graduate of the Franklin and Marshall College, Pennsylvania, and of the medical department of the University of Pennsylvania. He was granted honorary degree of Doctor of Science by Franklin and Marshall College. Dr. Craig served Pennsylvania continuously in the House of Delegates from 1903 to 1910. Since 1911 Dr. Craig has devoted his entire time to the work of the American Medical Association. He was a member of the American Academy of Medicine and president in 1912, and a member of the American Academy of Ophthalmology and Otolaryngology. Dr. Craig was active in religious and social work. Death occurred while on his vacation trip at Port Deposit, Maryland, and was the result of uremic poisoning.

In addition to the articles enumerated in our September Journal, the following articles were accepted during August for inclusion in New and Nonofficial Remedies:

H. K. Mulford Company:

Mercurialized Serum No. 2—Mulford;
 Mercuric Succinimide Hypodermic Tablets
 No. 50.

Parke, Davis and Company:

Adrenalin and Cocaine Tablets Rx B;
 Adrenalin Tablets No. 2;
 Brometone Capsules, 5 grains;
 Tuberculin (old) and Control for the Von Pirquet Test;
 Tuberculin Ointment for the Moro Test.

During September the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

H. A. Metz Laboratories:

Novocain and L-Suprarenin Tablets "H";
 Novocain Solution, 1 per cent;
 Novocain Base;
 Novocain Nitrate;
 Pyramidon Tablets.

United States Radium Corporation:

Ampules Radium Chloride 2 Cc-U.S. Radium Corp. (Radium element, 5 micrograms);
 Ampules Radium Chloride 2 Cc-U.S. Radium Corp. (Radium Element, 10 micrograms);
 Ampules Radium Chloride 2 Cc-U. S. Radium Corp. (Radium Element, 25 micrograms).

Winthrop Chemical Company:

Fereo-Sajodin.

SOCIETY PROCEEDINGS

District	Council for COUNCILORS' COUNCIL	Number of Counties	MEMBERSHIP CONTEST		
			1921 Memberships	1922 Member- ships to Date	Percent- age
First.....	Dr. Willis	7	176	175	.99
Second.....	Dr. Smadel	7	149	145	.96
Third.....	Dr. Leach	9	130	118	.90
Fourth.....	Dr. Osterman	10	138	136	.98
Fifth.....	Dr. Weinstein	5	158	163	1.03
Sixth.....	Dr. Schildman	8	150	160	1.07
Seventh.....	Dr. Earp	4	425	444	1.04
Eighth.....	Dr. Conrad	5	172	168	.97
Ninth.....	Dr. Moffit	10	253	256	1.01
Tenth.....	Dr. Shanklin	5	151	145	.96
Eleventh.....	Dr. Black	6	191	194	1.02
Twelfth.....	Dr. Calvin	8	241	247	1.02
Thirteenth.....	Dr. Berteling	8	274	256	.93
		92	2608	2607	

INDIANA STATE MEDICAL ASSOCIATION

Muncie Session

September 27-29, Inclusive, 1922

HOUSE OF DELEGATES

FIRST MEETING

The House of Delegates met in the Grill Room of the Hotel Roberts, Muncie, at seven p. m. September 27, 1922, the president, Dr. W. R. Davidson of Evansville, presiding.

Roll-call of delegates.

Moved by Dr. George R. Daniels that the minutes as printed in THE JOURNAL be adopted. Motion seconded and carried.

Moved by Dr. George R. Daniels that the report of the secretary-treasurer as printed in THE JOURNAL be adopted. Motion seconded and carried.

Dr. James N. McCoy, Vincennes, chairman of the Committee on Automobile Insurance, made the following report, and moved its adoption. Motion seconded.

REPORT OF COMMITTEE ON AUTOMOBILE INSURANCE

House of Delegates,
 Gentlemen:—

This Committee has proceeded with its work on the basic idea that a member of the State Medical Association is, from the nature of his work and his character as a member of a reputable profession, a preferred

risk for automobile insurance. The rates among the standard companies have gone to practically prohibitive figures for the doctor, as well as every other honest policy holder, because heretofore with every concern writing automobile insurance the doctor and other reputable automobile drivers have been insured at an even rate with reckless and criminal drivers. The Committee has, therefore, sought to obtain automobile insurance for the members of this association at rates which they believe proportionate to the moral hazard and actual risk of the insurance.

Your Committee has considered and investigated several procedures as follows, to-wit:

1. Insurance of the members of this Association with standard stock companies. This was found impossible because the standard companies are based on the maintenance of local and general agencies, which agents receive one-half of the premium written and the representatives of the standard companies whom we interviewed believed this would disorganize the agency force. And they gave us the further objections that automobile insurance at the best was not desirable and two of these standard stock companies stated to the Committee that they were contemplating retiring from this field of insurance. The fact is that the rates charged by this class of insurance companies are practically prohibitive.

2. The organization of a stock company or a reciprocal organization within and for the membership of this Association. It was found by consulting legal authority that the provisions of the Indiana statutes made this difficult and for the time being impossible. The first essential to the formation of a stock company would be the sale of \$50,000 worth of stock. The first essential to the formation of a reciprocal association would be to deposit with the Auditor of State, securities in the amount of \$25,000, together with 250 policies written on automobiles. Neither of the above procedures was deemed advisable, by reason of lack of time and the lack of authority of the State Medical Association to proceed. It was believed that it would be very difficult to do either of the above, even though no obstruction existed.

3. The execution of a contract between the State Medical Association and some reputable reciprocal organization, whereby the said reciprocal organization, in consideration of the large volume of business to be obtained, and by reason of the fact that the members of the State Medical Association constitute preferred risks for automobile insurance, would write individual policies for the members of the State Medical Association through the offices of the Secretaries of the various County Medical Societies at a premium rate which would be practicable for the said reciprocal organization and desirable to the members of the State Medical Association. The members of your Committee, before proceeding further toward the execution of a contract with a reciprocal organization, believed it necessary to inform themselves authoritatively on the legal phases of automobile insurance in general and as to the rights and liabilities of a policy holder dealing with a reciprocal organization, in particular. The legal firm of Emison & Hoover, a firm composed of reputable and dependable lawyers, was therefore employed to give a legal opinion to the Committee, covering the entire subject of automobile insurance in general and the rights and liabilities of the holder of a policy from a reciprocal organization in particular. The legal opinion of the said firm of Emison & Hoover is herewith submitted in full.

August 8, 1922.

Dr. J. N. McCoy,
Vincennes, Indiana.

Individuals, partnerships and corporations of this state may exchange reciprocal or inter-insurance contracts with each other, providing indemnity among themselves from any loss which may be insured against relating to all classes of automobile insurance. The above mentioned parties are hereinafter designated "subscribers."

Such contracts may be executed by an attorney, or other representative designated attorney, duly authorized and acting for such subscribers. They may designate where the attorney's office is to be.

The subscribers through their attorney shall file with the Auditor of State a verified declaration, setting forth:

- (a) Name adopted by such subscribers.
- (b) Kind or kinds of insurance to be exchanged.
- (c) A copy of the form of policy contract.
- (d) A copy of the form of the power of attorney.
- (e) Location of office issuing such contracts.
- (f) Bona fide applications of 250 separate risks, aggregating not less than \$1,500,000.

(g) That such attorney has possession of assets for payment of losses—according to requirements hereinafter stated.

(h) A financial statement under oath in form prescribed for annual statement.

(i) An instrument authorizing service of process.

At the same time, the attorney shall also file with the Auditor of State an instrument executed by him for said subscribers, conditioned that upon Certificate of Authority (issuance of Inter-Insurance License) service of process may be had upon the Auditor of State in all suits in this state arising out of such policies, which service shall be binding upon all subscribers exchanging at any time Inter-Insurance contracts through such attorney.

There shall at all times be maintained as assets **a sum in cash or securities, amounting to 50 per cent of the net annual deposits, collected and credited to the accounts of subscribers, in addition also cash or securities assets sufficient to discharge all liabilities on all outstanding losses arising under policies issued.** Net deposits shall be construed to mean the advance payments of the subscribers after deducting the amount agreed upon for expenses. The assets shall not be less than above or \$25,000.00.

The attorney shall make a report under oath to the Auditor of State each year giving the financial condition of affairs.

The attorney shall pay annually such taxes, licenses and fees as are required to be paid by a mutual insurance company.

The attorney may insert in any form of policy prescribed by the laws of this State any provisions or conditions required by the plan of reciprocal or Inter-Insurance provided the same shall not be inconsistent with the law of this State.

The theory of the reciprocal or Inter-Insurance is "insurance at the lowest possible rate." Early Automobile Insurance was attempted by the old line companies but automobile insurance with them was experimental and rates excessive. Later automobile insurance companies grew up. They were also expensive. Then the reciprocal law came into existence. It grew up as a result of a demand for cheaper rates. The cheaper rates were accomplished by not having to pay a stock dividend (of all the way from six to ten per cent), by cutting out the commission of a district agent, by doing away with the state agent who received his fee; it did away with the expensive and high salaried offices of president, vice-president, secretary and treasurer. The only expense of a reciprocal organization is that of the attorney.

The attorney is the sole negotiator. He represents both sides. His powers are limited by such articles of agreement as may be adopted by the subscriber.

The theory on which such an association is organized is as follows:

Suppose there are four men in a room (designated A, B, C and D), wanting to indemnify each other against losses as a result of automobile accidents. While the four men are talking, another man (E) comes in and says he would like to get in on it. In order to simplify matters A (attorney) acts as spokesman and asks B, C and D if they are willing to take in E. They all answer "yes" and as a result A negotiates with E. Thus you see that A represents E and also A, B, C and D. As such association grows, it becomes necessary to give A (attorney) certain powers in advance in order to facilitate matters. These powers are enumerated in the articles of agreement. The Attorney-in-fact may be an individual, a partnership or a corporation.

The manner in which such associations are formed is as follows:

A person goes on the street and hunts up 250 friends and asks if they would take out insurance. They accept. The next step is to have \$25,000.00 on deposit (by ruling of the Commission of Insurance) in Indianapolis with the Insurance Department. The attorney then makes application for license to issue Inter-Insurance. If such application is granted, he then again sees the 250 men and signs them up for insurance. This person (attorney) acts as your agent in all negotiations. If the 250 want to expand, the attorney solicits subscribers for them.

All premiums are paid to the attorney. Suppose this association styles itself the X Y Z Association. The attorney issues the policy to the new subscriber in behalf of the X Y Z Association. If there is a loss the Attorney signs the check X Y Z Association, by "A," Attorney. The X Y Z Association is merely a

compendious name for all the subscribers. The attorney makes use of this compendious name in behalf of all the subscribers.

The Attorney is the only expense connected with such insurance (other than losses due to accidents).

Generally the power of Attorney is as follows:

He shall make, issue, change, modify, reinsurance or cancel contracts of insurance, containing such terms, clauses, conditions, warranties and agreements as the subscribers shall empower him to. He may demand, collect, receive and receipt for all moneys due the subscriber, or for credit to his account. He may perform or waive all agreements.

He is your agent to accept service and appear for the subscriber in suits, to prosecute, defend, compromise, settle or adjust the same. He executes all documents necessary to comply with the law. In other words, the Attorney is the subscribers' agent and can do just what the articles of agreement permit him to do.

As to Liability: Suppose that the sufficient losses occur so as to necessitate a greater amount of money than is on hand. In such a case just what is the liability of the subscriber? On September 1, 1921, Attorney General of Indiana, Mr. Lesh, said it could be determined by the subscribers. For instance, if there are 250 subscribers, they can agree that no subscriber shall be held for more than 1/250 of the loss. It is a several liability which can be limited as the subscribers see fit.

One of the disadvantages of such insurance lies in the fact that service can be had on any one subscriber and if the Attorney refuses to appear the subscriber has to defend the suit. Of course, the subscriber has recourse against the Attorney. If should be stated, however, that such a disadvantage is only theoretical since the Attorney in your instance (chosen by the subscribing physicians) will undoubtedly appear.

As to Mutuals:

In 1915 the legislature passed an act authorizing the organizing of mutual insurance companies with limited powers. By this act insurance of indemnity is provided for loss in case of auto accidents, theft, etc., other than bodily injury to the person. Twenty or more persons, majority of whom must be bona fide residents of the State of Indiana, may associate themselves together as a corporation under this act. They must make application to the Auditor of State and specify in their application the purpose of the association, and the place of the home office, which must be somewhere in Indiana. Before the Association is permitted to do business, it must have at least 200 risks which must aggregate at least \$500,000.00. The Association is limited in the amount of any one risk. No one risk can exceed in amount three times the average risk. The statute also provides that the maximum risk may equal one percent of the aggregate insurance in force. If the aggregate insurance in force is \$500,000, a policy of \$5,000 may be accepted. If this sum should be larger than three times the average risk, it would be accepted as the maximum. If on the other hand the average risk when multiplied by three should exceed one per cent of the aggregate insurance in force, then that would be accepted as the maximum risk.

The association will be permitted to reinsure, that is, upon taking a risk, the association can, if it so desires, reinsure the risk or a part thereof, in some other company and can, if the associates so desire, accept insurance from other companies. Premiums are required to be paid in cash, and the corporation will be required to keep on hand in cash in an amount not less than twice the maximum of any one single risk and at no time less than \$10,000.00 in cash. Also required to have on hand admitted assets at least two times any maximum risk assumed. In case of an organization of the mutual type you will be required to adopt by-laws not inconsistent with this act for your government. The by-laws shall provide for a cash premium. The corporation may limit the contingent liability of its members.

The cash premium above spoken of must be expressed in the policy. The corporation may limit the

Dr. James McCoy, Chairman,
Committee on Automobile Insurance,
State Medical Association,
Vincennes, Indiana.

Dear Doctor:

With regard to the automobile insurance of members of the Indiana State Medical Association, we hereby authorize you to present to the State Medical Association the following:

The Standard Auto Insurance Association by the Bainum-Phillippe Company, Attorney-in-Fact, agree to

contingent liability of the policy holder to one premium or to any member above not exceeding ten. This contingent liability must be plainly expressed in the policy. Policy holders shall be members of the Association and may vote in person or by proxy.

We take it from reading the statute that it was intended to cover accidents to autos including theft, fire, property and collision and to afford cheap insurance. The company being mutual, the legislature has thrown certain guards about the plan and put certain limits upon the corporation. These are as to the admittance of the risks; limits the premiums the policy holders will be required to pay, requires certain amount of cash and admitted assets to be on deposit as a protection to the policy holder. All this must be done to the approval of the Auditor of the State. From the reading of the statute it appears that the State Auditor is to keep strict watch over the Association. Should it happen that the Corporation did not have on hands assets at least equal to the unearned premium reserve and other liabilities, the Corporation is required to assess its members liable to assessment in order to provide for such deficiency.

At the first of the opinion concerning Mutuals you recall that loss or damage by reason of bodily injury was excluded. There is a provision in this act under which such insurance may be made (in addition to collision, theft, fire and property discussed above).

To make such insurance, you will note the following:

It differs in that at no time does the statute speak of a \$10,000.00 cash deposit. But, it shall hold admitted assets for each kind of insurance (fire, theft, property, collision and liability) equal to at least FIVE times the maximum single risk assumed. The maximum single risk shall not exceed 20 per cent of its admitted assets, or three times the average policy, or one per cent of insurance in force, which ever is the greater, simultaneous reinsurance being deducted in determining the maximum single risk. Otherwise, the provisions are similar.

As to the rights and liabilities of the insured and the insurer in case the insured or policy holder should fail to pay his premium when due, we wish to say that the legislative acts on which we gave our opinion are silent. We, therefore, have to go to the laws governing insurance in general on that proposition. We might say that all policies of insurance provide that in case the policy holder shall fail to pay his premium when due, that his insurance is forfeited and all his rights under the policy are at an end, except the privileges that are given the insured after lapse. The question of payment of the premiums is one of contract and the payment thereof may be made binding upon the insured or policy holder, but as stated above we feel safe in saying that it is the universal rule that where the insured or policy holder permits his premium to lapse, all his rights are forfeited. These provisions are embodied in the policy.

This is true in the case of Inter-Insurance, Mutual Insurance and Stock Insurance. Of course, the delinquent may be reinstated according to the Articles of Agreement or by-laws.

Then, too, in the case of Inter-Insurance in the Articles of Agreement, there is generally found a stipulation to this effect.

"The policy may be revoked or cancelled, by either the Company or the policy holder, by giving to the other days notice in writing. In the event the Company makes the cancellation, it shall return the unearned premium; and in the event the policy holder makes the cancellation, there shall be returned of the unearned premium."

Mutual Insurance is likewise a question of contract, and the by-laws may make a stipulation similar to the one suggested above.

It is to be noted and remembered, however, that the policy holder is liable for all assessments which are the result of any liability or accidents which occur prior to an effective cancellation of said policy.

EMISON & HOOVER.

Of the offers received from reciprocal organizations, that received from the Standard Auto Insurance Association was found to be the lowest and best offer. That offer is herewith submitted in full.

August 15, 1922.

insure the members of the Indiana State Medical Association for the period of one year, the said year to begin at any date fixed by the State Medical Association, on the following rates, to-wit:

INDIANA COUNTRY SCHEDULE

Class List Price of Pleasure or Commercial Cars		Fire, Lightning and Wind, per \$100.	Theft, per \$100..	\$25 Deductible Collision.....	\$50 Deductible Collision.....	\$100 Deductible Collision.....	Full Coverage Collision.....	Public Liability.....	Property Damage \$1 to \$1000
1 Under	\$799	.60	.40	\$12.00	\$ 8.00	\$ 6.00	\$20.00	\$10.00	\$ 5.00
2 \$ 800 to 1200		.60	.40	15.00	12.00	8.00	25.00	10.00	5.00
3 1300 to 1799		.60	.40	22.00	15.00	10.00	30.00	10.00	6.00
4 1800 to 2499		.60	.30	27.00	17.00	10.00	35.00	10.00	6.00
5 2500 to 3499		.50	.30	30.00	22.00	12.00	40.00	12.00	8.00
6 3500 to 4999		.50	.30	36.00	27.00	15.00	45.00	12.00	8.00
7 5000 Up		.50	.20	42.00	35.00	20.00	50.00	14.00	9.00

LAKE AND MARION COUNTIES, INDIANA

1 Under	\$799	.75	\$2.50	\$22.00	\$12.00	\$12.00	\$30.00	\$12.00	\$ 8.00
2 \$ 800 to 1299		.75	1.50	28.00	16.00	15.00	35.00	12.00	8.00
3 1300 to 1799		.75	1.25	36.00	20.00	20.00	42.00	15.00	9.00
4 1800 to 2499		.60	1.00	44.00	30.00	25.00	48.00	15.00	9.00
5 2500 to 3499		.50	.50	50.00	35.00	28.00	52.00	18.00	10.00
6 3500 to 4999		.50	.30	60.00	40.00	35.00	56.00	18.00	10.00
7 5000 Up		.50	.30	70.00	45.00	40.00	60.00	20.00	12.00

INDIANA SCHEDULE, CITIES FROM 20,000 TO 100,000

1 Under	\$799	.75	\$.75	\$15.00	\$12.00	\$ 6.00	\$25.00	\$10.00	\$ 5.00
2 \$ 800 to 1299		.70	.50	20.00	16.00	8.00	30.00	10.00	5.00
3 1300 to 1799		.60	.50	25.00	20.00	10.00	35.00	10.00	6.00
4 1800 to 2499		.60	.40	30.00	24.00	12.00	40.00	10.00	6.00
5 2500 to 3499		.60	.40	40.00	28.00	12.00	45.00	12.00	8.00
6 3500 to 4999		.60	.40	45.00	32.00	15.00	50.00	12.00	8.00
7 5000 Up		.60	.30	50.00	42.00	20.00	55.00	14.00	9.00

It is understood and mutually agreed that the agents' premium or the membership fee is hereby cancelled on each of the said prospective policies and that the insurance shall be written for each member of the State Medical Association who requires it by means of his application through the Secretary of the County Medical Society in which he resides.

Yours very truly,

THE "STANDARD."
By H. M. ROBBINS

HMR/AW

The Committee finds that the Standard Auto Insurance Association is a reciprocal concern, organized under the laws of Indiana, with the firm of Bainum-Phillippe Company as Attorney-in-Fact and that the said Bainum-Phillippe Company maintain the central office of this organization at Vincennes, Indiana. Your Committee then proceeded to make a thorough investigation of the financial standing of the Standard Auto Insurance Association. Being cognizant of the fact that the success of a reciprocal association depends largely upon the integrity, business ability and financial stability of the Attorney-in-Fact, a sworn statement was required and obtained from the offices of the Bainum-Phillippe Company, Attorney-in-Fact, setting forth the stockholders in full of the Bainum-Phillippe Company, which is herewith submitted.

August 16, 1922.

Ralph C. Phillippe, being duly sworn, states that the capital stock of the Bainum-Phillippe Company is held by the following persons, to-wit:

Herman Robbins Vincennes, Indiana
Ralph C. Phillippe Vincennes, Indiana
Max S. Kos Vincennes, Indiana
Marion D. Gould Vincennes, Indiana

He further states that the above named constitute the sole stockholders and that the Bainum-Phillippe Company is Attorney-in-Fact for The Standard Auto Insurance Association.

RALPH C. PHILLIPPE.

State of Indiana, County of Knox, ss:

Personally appeared before me, Ralph C. Phillippe and makes oath that the above is a true statement.

WALTER C. McFARLAND, Notary Public.

My commission expires January 16, 1925.

Your Committee then investigated the Bainum-Phillippe Company and find that the stockholders composing it are men of integrity, business ability and financial stability and have a reputation which is perfectly satisfactory wherever they are known.

Your Committee, therefore, recommends that the State Medical Association enter into an agreement with the Standard Auto Insurance Association to the effect that insurance shall be written by the Standard Auto Insurance Association on the automobiles of members of the State Medical Association for the year ending October 30, 1923, at the rates offered by the said Standard Auto Insurance Association. It is further

recommended that a Committee be appointed by the State Medical Association for the ensuing year for the purpose of maintaining a connection between the State Medical Association and the Standard Auto Insurance Association and to continue during that year to have the subject of automobile insurance under consideration.

Respectfully submitted,

JAMES N. MCCOY, Chairman
ROBLEY D. BLOUNT, Member
CHARLES S. BRYAN, Member

In the discussion which followed Dr. McCoy stated that the taking of this form of insurance (in case the motion carried) would be a purely voluntary act on the part of members of the Association—that there would be no obligation.

In answer to the question how these rates compare with those of the old line companies who issue automobile insurance, Dr. McCoy gave the following figures:

Essex touring car, value \$1150.00, old line companies would insure at \$950.00; premium \$188.00 per year outside Marion County: \$255.00 in Marion county. Standard Auto Insurance Company, under the above agreement, would insure at \$1,000; premium \$56.40 outside Marion county, \$76.37 in Marion county.

Hudson car, value \$1845.00, old line companies at 1500.00; premium \$200.50 country schedule: \$275.00 Marion county. Standard Auto Insurance Company, \$77.50 and \$96.00, respectively.

The full coverage cost of insurance (old line) on a Ford car is \$132.20 on \$400.00 valuation, outside Marion county; in Marion county, \$175.00. Standard Auto Insurance Company, country schedule, \$39.00; Marion county, \$55.25.

Dr. McCoy's original motion, amended to read that a committee shall be appointed to obtain a liaison with the Standard Auto Insurance Company, was carried.

The president announced that the original committee would be continued.

Moved by Dr. J. N. McCoy that this report be published in full in THE JOURNAL. Motion seconded and carried.

Moved by Dr. George R. Daniels that the report of the Committee on Public Policy and Legislation, as printed in THE JOURNAL, be adopted. Motion seconded and carried.

The president announced that the American Medical Association is asking for the appointment of a committee by this Association to draft resolutions objecting to the training of World War veterans as chiropractors.

It was moved that such a committee be appointed. Motion seconded and carried. The president appointed the following committee, with instructions to report to the House of Delegates Friday morning: F. S. Crockett, Lafayette; P. B. Work, Elkhart; A. M. Mitchell, Terre Haute.

Dr. Edgar F. Kiser, Indianapolis, presented the following memorial to Dr. Albert C. Kimberlin, to Dr. Frank B. Wynn, and Dr. Edwin C. Walker:

RESOLUTION

As the mighty oaks tower above their brothers of the forest, so Albert C. Kimberlin, Frank B. Wynn and Edwin Walker stood preeminent among their fellows. Their lives ran along strikingly parallel lines. Men of humble parentage, their unusual ability and application raised them to the forefront of their profession, not alone within the borders of the State, but throughout the nation.

Modest in demeanor, of untiring zeal, courtly in manner, constantly extending a helping hand to the younger men in medicine, they were beloved of all who knew them. Not alone their confreres, but thousands whom they had befriended, hailed them as benefactors.

The demands upon their time in the practice of their chosen profession did not prevent them giving unusual attention to the pursuit of scientific investigation and research, and medicine has been greatly enriched by their contributions. Nor was medicine their only beneficiary. Our city and state have profited enormously by their activities in civic and communal work.

They were God-fearing men and have left to their families a heritage of which they may well be proud.

The Creator in His wisdom has seen fit to call to their eternal rest these, our esteemed colleagues. We who were proud to be their associates and friends thus give expression to our grief at the loss of these good men and extend to their families our profound and sincere sympathy.

BE IT RESOLVED, that this memorial be made a part of the minutes of the 1922 meeting of the House of Delegates of the Indiana State Medical Association, and that a copy be transmitted to the families.

EDGAR F. KISER,
C. H. McCASKEY,
G. B. JACKSON.

Moved that this memorial be adopted and spread upon the minutes. Motion seconded and carried.

The secretary then read the following communication from the Floyd County Medical Society regarding the Prohibition Law:

Whereas, the Prohibition Law as it at present exists, is unsatisfactory, creates a hardship and is a detriment to the sick and afflicted, and should be so modified and amended as to meet the requirements and conditions of those unfortunate:

Therefore, be it resolved, that the Floyd County, Indiana, Medical Society offer the following resolutions to our Congressmen and Senators.

1. That all Alcohol, Whiskies and Brandies for Scientific and Medical purposes, uses and requirements be put up in sealed containers, of one-half pint, one pint and quart containers for Medical use to the sick.

2. That Alcohol, Whiskies and Brandies be put under the Narcotic Law.

3. That regularly Licensed Druggists and Pharmacists procure it from the Distillers, on permit, in duplicate form Blanks, issued by the Government, the same as for Narcotics.

4. That he can only dispense it on prescriptions of regularly Licensed Physicians duly signed in form, in unbroken seal containers.

5. That only regularly Licensed, on Government permit, Physicians can prescribe alcoholics in unlimited quantity, as may be needed, in the physician's judgment, to meet the requirements and necessities of the patient.

6. That the penalty for the violation of the Alcoholic Act, be the same as for the violation of the Narcotic Act.

Be it further resolved, that a copy of these resolutions be sent to the Secretary of the Indiana State Medical Association, to be presented to the House of Delegates at the next Annual Meeting for consideration and action.

WM. C. WINSTANDLEY,
WM. L. STARR,
P. H. SCHÖEN,
Committee.

Moved by Dr. George R. Daniels that this communication be received and placed on file. Motion seconded and carried.

Dr. E. M. Shanklin, chairman of the Medical Defense Committee, offered the following resolution, regarding a change in the By-Laws:

"RESOLVED: That Section 8 of Chapter XI be amended by adding after the word "constitution" in the 17th line, the following: 'nor in case of removal of a member from the State of Indiana'."

This was held over until Friday morning.

Dr. Alfred Henry of Indianapolis offered the following resolution:

"WHEREAS, the Indiana Tuberculosis Association is carrying on a campaign for a more intelligent appreciation of the medical problem, which is evidenced in its program for the prevention and control of tuberculosis, its health activities among children, the organization of county groups stimulating interest among laymen, the progress being made in bringing about the earlier diagnosis of tuberculosis, and increased facilities for the care of tuberculosis; therefore,

BE IT RESOLVED, that the Indiana State Medical Association endorse the work of the Indiana Tuberculosis Association and urge the earnest support of the medical profession in furthering its endeavors."

Moved by Dr. George R. Daniels that this resolution be adopted. Motion seconded and carried.

Dr. C. S. Black of Warren, in behalf of the Howard County Medical Society, made the following motion:

"That Howard county be transferred from the Ninth to the Eleventh Councilor District."

Motion seconded and carried.

Dr. A. L. Marshall of Indianapolis, on behalf of the Indianapolis Medical Society, submitted the following resolution:

Whereas, your Committee recognizes the right of the State to supervise Medical education, to conserve the health and well-being of its citizens, and to that end has the privilege and duty of erecting and maintaining institutions for Medical education, for the care and treatment of its indigent population, and has the right and duty of fixing the standard for the proper performance of the Medical Practice Act, and,

Whereas, the State has the right and duty to conduct and maintain adequate State and County Health Boards, and in so far as it fulfills all these above indicated rights and duties, should have and does have the unqualified support of the Medical Profession in the fulfillment of these vested rights, which in no sense conflict with the principles hereinafter set forth, and,

Whereas, certain abuses of the above rights and duties, which abuses, if unchecked, will develop into State Medicine, a term which to most physicians and people, has meant everything and meant nothing, and which may be defined as the sum of a number of growing evil tendencies not commonly interpreted as having any part in Medical Socialism, and,

Whereas, the indicated abuses have been, and are still indulged in, and abetted by the State or its agents, we, therefore, offer the following resolutions as a platform of principles upon which the Indianapolis Medical Society should stand.

RESOLVED—

1. That while the Indianapolis Medical Society heartily supports the proposition that the State should care for its mental and moral defectives, and its indigent sick, it unqualifiedly condemns the tendency of the State to enter into competition with licensed physicians in the practice of Medicine and Surgery, and it condemns the maintenance of pay beds and wards in State Institutions or those partially subsidized by the State.

2. That it condemns the practice of appointing physicians to salaried and advertised positions and at the same time permitting these same salaried officials, free competitive rights against the profession to which

they belong, and declares that no person employed in any of its Medical Institutions, Hospitals, or Colleges, either in whole or in part supported by State funds, who occupies a position of trust or a chair of teaching in any department of Medicine or Surgery and who receives pay or salary for such employment, should be accorded the privilege of private medical or surgical practice, so long as such person is employed by the State and receives pay for services from any State funds of whatsoever character.

3. That it commends the establishment of free clinics for the treatment of tuberculosis, mental hygiene, venereal, and other diseases of the indigent sick, but for no other than the indigent.

4. That it endorses in public health administration full time salaried officers who shall not, during their service, have the privilege of private practice, nor any right of supervising private practice.

5. That it upholds the standard and purpose of the State Medical Practice Act and insists that all persons engaged professionally, in the treatment of diseases, or the sick, whatsoever, of any description, shall be wholly subject to the same standard of educational qualifications and State examinations.

6. That while, at the present time, it recognizes the necessity of certain societies and industrial development to maintain adequate medical and surgical staffs, it deplores the growing tendency to widen the scope of contract and similar medical and surgical practice wherein the profession is not remunerated according to the usual competitive method and the patient not permitted to use his own selection of physicians.

7. That it condemns legislative enactments relative to all health matters, without the sanction and approval of the licensed and registered Medical Profession.

8. That it opposes lay and political domination of Medical and Surgical practice as opposed to sound public policy and to the scientific progress of medicine.

9. That, while it endorses the efforts of the agents of the Federal and State Governments in their desire to promote the health of the people, it condemns Federal supervision of State medical activities, masquerading under the guise of Federal aid or subsidy.

10. That it condemns the socialistic efforts of State, Federal, County or Municipal agents, to force the expense of private health upon the taxpayers, under the guise of Public Health.

11. That it condemns all "propaganda and elements at work" to create fictitious health problems, as attempts to socialize the Medical Profession, under the plea of "suffering humanity," whereby a great part of an independent people would be segregated into a pauperized class.

12. That it condemns the exploitation of special fields of medicine, surgery and obstetrics, by technicians, who are not qualified, licensed physicians.

Recognizing that the successful treatment of sick people depends upon personal and confidential relations between physician and patient, which relations are impossible under any of the indicated evils; and knowing humanity in its strength and in its weakness, in health and in disease, in wealth and in poverty, we, who dedicate our lives to the scientific investigation, prevention, and treatment of disease, with firm conviction in the ultimate wisdom of our course, offer these resolutions, and pledge our best efforts to uphold all true American ideals and principles.

Be it further resolved, that a true copy of these resolutions be immediately sent to the Secretary of each County Medical Society of the State of Indiana, to the Editor of the Indiana State Medical Journal, and to the Editor of the Journal of the American Medical Association.

Moved by Dr. Albert E. Bulson, Jr., that this resolution be referred to the Council with the request that its action be reported back to the House of Delegates. Motion seconded and carried.

Dr. George F. Keiper of Lafayette offered the following resolution:

"WHEREAS, the Indiana Workmen's Compensation Act provides that companies insuring contractors and concerns against liability for accidents to their employees shall pay for only sixty days of hospital care and professional services rendered the injured coming under the provisions of this Act; and

"WHEREAS, many cases of this nature cannot recover within the sixty-day period; therefore

"BE IT RESOLVED by the House of Delegates of the Indiana State Medical Association that an amendment to this Act to cover all treatment and care necessary in these cases be procured from the next session of the General Assembly, and that this task be committed to the Committee on Public Policy and Legislation."

Dr. Keiper moved the adoption of this resolution. Motion seconded and carried, and the resolution referred to the Committee on Public Policy and Legislation.

There being no further business to come before the House of Delegates, adjournment was taken to meet at eight o'clock Friday morning in the High Street Methodist Church.

SECOND MEETING

Pursuant to adjournment the House of Delegates convened at eight-ten, September 29th, in the High Street Methodist Church, the president, Dr. W. R. Davidson, presiding.

Roll-call of delegates.

The first order of business was election of officers, which resulted as follows: President, Charles H. Good, Huntington; first vice-president, Wilson T. Lawson, Danville; second vice-president, John H. Reed, Logansport; third vice-president, Charles S. Bryan, Vincennes; secretary-treasurer, Charles N. Combs, Terre Haute. Delegates to American Medical Association—J. R. Eastman, Indianapolis; alternate, M. R. Combs, Terre Haute. Committee on Administration and Medical Defense—David Ross, Indianapolis (to fill unexpired term of Dr. Frank B. Wynn); George R. Daniels, Marion (re-elected for ensuing three years). Committee on Hospital Standardization—E. J. Lent, South Bend (re-elected for ensuing five years).

Dr. F. S. Crockett, for his committee, made the following report:

"WHEREAS, it appears that a number of ex-service men from all parts of the country are being enrolled in schools for the training in Chiropractic with the sanction and approval of the United States Government as a proper vocational training for disabled ex-service men; therefore

"BE IT RESOLVED, that the House of Delegates of the Indiana State Medical Association, in annual session assembled, representing the legally qualified physicians of Indiana, of whom there are over 6,500, approves the sentiments expressed in the resolution adopted by the American Medical Association at its annual meeting at St. Louis in June, 1922, condemning this action by the Federal Government, and hereby directs that the proper officials of this Association memorialize and petition the Federal Government, and particularly the Director of the Veterans' Bureau and the Assistant Director in charge of the Rehabilitation Division of that Bureau, and each Senator and Representative from this State, and to take such other action in the interest of the welfare of all the people, and also for the protection of those who honestly desire to administer to the sick, to the end that the ex-soldiers seeking vocational training which will fit them for ministering to the sick and aiding in the recognition, control and prevention of disease, shall be sent to schools equipped to give adequate training and which at least meet the requirements of the American Medical Association for Class "A" Medical schools.

F. S. CROCKETT, Chairman."

Moved that this resolution be adopted. Motion seconded and carried.

The president announced the following ruling—that in the case of the death of a Councilor during the year, the president of the District Society shall have power to appoint a successor for the unexpired term. (Taken by consent.)

Dr. Frank W. Black of Ligonier brought up the matter of medical inspection in schools, and in connection therewith read the state law (which follows), the last clause of which should be amended:

"Sec. 5, page 340, Acts 1921: The school superintendent of any attendance district may make or have made an examination of any or all children between the ages of seven and sixteen years and may exclude or excuse from school any child found mentally or physically unfit for school attendance, provided such exclusion or excuse is approved and certified to by a physician in good standing, and providing further that such exclusion or excuse shall be valid for not longer than the school year during which it is issued.

PROVIDED that no pupil or minor shall be compelled to submit to medical examination or treatment under authority of this section whose parent or

guardian objects to the same. Such objection shall be made by written and signed statement delivered to the pupil's teacher or to any person who might conduct such examination or treatment in the absence of such objection."

Moved that this matter be referred to the Committee on Public Policy and Legislation. Motion seconded and carried.

Dr. Albert E. Bulson, Jr., read the following report of the Council, regarding the resolution of Dr. Marshall:

"House of Delegates,
Indiana State Medical Association.
Gentlemen:

Your Council desires to make the following report concerning the resolution referred by you for consideration:

With the exception of the first two paragraphs, the Council approves and heartily endorses the resolution.

Concerning the first two paragraphs, which concern the management and policies of hospitals, medical schools and other institutions under State control, your Council believes that the subject deserves further study and investigation before this Association passes judgment upon the matters considered.

Realizing the fact that the medical department of the Indiana State University, and the hospitals and other institutions directly or indirectly connected therewith, should have the cordial support of this Association and each and every individual member thereof, and realizing that the rank and file of the membership of this Association may not be acquainted with the policies of such institutions and therefore are not giving such enterprises the endorsement and support that they desire, the Council begs leave to recommend that the President of this Association appoint a committee of three and not more than five members of the Association, to meet the Trustees of Indiana University and officers of the medical department of the University and hospitals connected therewith, for the purpose of obtaining full and detailed information concerning the management and policies of such enterprises, such information to be embodied in a report to be printed at once in the JOURNAL of this Association, to the end that the representative medical men of the State forming this Association may have a more accurate idea of the functions and policies of those institutions and the manner of their management.

Your Council makes this recommendation solely with the view of bringing about a better understanding between the medical profession of the State and the medical department of Indiana University, and with the hope that the conference suggested will result in mutual advantage and the encouragement of co-operation and harmony in promoting the interests of both.

Your Council further recommends that the actual expenses of such a committee as recommended shall be borne by this Association.

Furthermore, pending the report of the committee, your Council recommends that the resolutions sent for consideration be laid upon the table for further action.

Respectfully submitted,

ALBERT E. BULSON, JR.,
J. H. WEINSTEIN,
S. E. EARL,
Committee of the Council."

Moved by Dr. A. M. Hayden that this report be adopted. Motion seconded and carried.

The president announced that this committee would be appointed within a day or two.

Dr. A. H. Rhodes presented the following suggested amendment to Paragraph 8423, Burns' Revised Statutes of 1914:

"In addition to the penalties herein provided, the judges of the various Circuit Courts in this State shall have the power, and it is made their duty, to grant restraining orders and injunctions against any person practicing medicine, as herein defined, until such time as such person shall have obtained the license so to practice in the manner and in the form as herein provided; and such judges shall have all powers in such connection as they may have in issuing other injunctions."

This was referred to the Committee on Public Policy and Legislation with the recommendation that it be presented to the next session of the Legislature.

Dr. W. R. Davidson, president, took the floor to speak on the idea of engaging a field secretary who would give his entire time to speaking before lay audiences throughout the state.

Dr. J. A. MacDonald moved that the Chair appoint a committee of three to arrange for the selection of an Educational Secretary, whose duties and salary would be defined by the Council.

Motion seconded by Dr. Alfred Henry and carried.

Dr. F. W. Gregor was allowed the privilege of the floor in order to speak in favor of the appointment of Dr. J. N. Hurty of Indianapolis, retiring State Health Commissioner, to the position of Educational Secretary.

The House of Delegates, having thus created the Committee on Public Education, the president announced the personnel of that committee as follows: W. N. Wishard, Indianapolis; David Ross, Indianapolis; F. W. Gregor, Indianapolis.

Dr. J. A. Craig of Greenwood moved the appointment of a committee of from three to five, to which shall be referred the matter of investigating the feasibility of reorganizing the Indiana State Medical Association so as to increase the size of the constituent units, said committee to report to the next annual session. Motion seconded by Dr. George D. Miller of Logansport, and carried.

Dr. George T. McCoy of Columbus, speaking on the subject of the difficulty of maintaining societies in the smaller counties, cited the example of his own county in obviating the existing difficulties. He said that Bartholomew county had an unwritten agreement with the counties of Jackson and Jennings whereby joint meetings of the three societies were held, first in one of the counties and then another. This arrangement increased the interest as well as the attendance at the meetings and yet enabled the physicians in each county to meet once a month.

Following this a discussion ensued, led by Drs. Harry Knott of Plymouth, O. T. Brazelton of Princeton, and J. N. McCoy of Vincennes, concerning the chiropractic question.

No further business presenting, the meeting adjourned.

CHARLES N. COMBS, *Secretary.*

GENERAL MEETINGS

FIRST MEETING

The first General Meeting was held in the High School Auditorium, Muncie, Indiana, September 28, 1922, being called to order at nine-fifteen a. m. by the president, Dr. William R. Davidson, Evansville, Indiana. The president announced that the address of welcome by the mayor of Muncie had been printed in the Muncie *Dynamo*, in order that it might have a wider circulation.

The president read his address, entitled "The Status of the Profession in Indiana".

On motion, duly seconded, Dr. J. E. Rush, of New York City, was permitted to speak for ten minutes on behalf of the American Society for the Control of Cancer.

Dr. George W. McCaskey, Fort Wayne, Indiana, read a paper entitled "The Medical Phase of Endocrinology".

Dr. C. C. Bitler, Newcastle, read a paper entitled "The Neurological Phase of Endocrinology".

Dr. W. D. Gatch, Indianapolis, read a paper entitled "The Surgical Phase of Endocrinology".

The above symposium was discussed by Drs. Edgar F. Kiser, Indianapolis; Albert E. Sterne, Indianapolis; Charles P. Emerson, Indianapolis; Tom Jones, Anderson; C. H. Good, Huntington; George W. Spohn, Elkhart; C. S. Bond, Richmond; George F. Keiper, Lafayette; Charles Stoltz, South Bend; J. R. Eastman, Indianapolis; Charles A. Sellers, Hartford City; Grace L. Homan, Laporte; and the discussion closed by Drs. George W. McCaskey, C. C. Bitler and W. D. Gatch.

Adjourned.

SECOND MEETING

The last General Meeting convened at two o'clock p. m. September 29th, the newly-elected president, Dr. C. H. Good, of Huntington, presiding.

Dr. Charles F. Neu, Indianapolis, read a paper entitled "Meningitis: Differential Diagnosis".

Dr. Miles F. Porter, Jr., Fort Wayne, read a paper entitled "Meningitis: Treatment".

Dr. Harry Boyd-Snee, South Bend, read a paper entitled "Otitic Meningitis".

The above symposium was discussed by Drs. Robert M. Moore, Indianapolis; D. O. Kearby, Indianapolis; C. Norman Howard, Warsaw; C. H. McCaskey, Indianapolis; Charles G. Beall, Fort Wayne; Charles A. Sellers, Hartford City; and the discussion closed by Drs. Charles F. Neu, Miles F. Porter, Jr., and Harry Boyd-Snee.

The president, Dr. C. H. Good, expressed to the physicians of Muncie the appreciation of the State Medical Association for the very satisfactory way in which they had taken care of the meeting, both from a social and scientific standpoint.

The meeting adjourned *sine die*.

SECTION ON SURGERY

FIRST MEETING

The Section on Surgery met in the High School Auditorium, the first meeting called to order at two p. m. September 28th, by the chairman, Dr. A. S. Jaeger, of Indianapolis.

Dr. Charles H. Frazier, Philadelphia, delivered the address in surgery, entitled "The Trend of Neurological Surgery".

A rising vote of thanks was tendered Dr. Frazier for his splendid address.

Dr. J. Rilus Eastman, Indianapolis, read a paper entitled "A Safe Method for Drainage of Intra-Abdominal Abscesses". This paper was discussed by Drs. Miles F. Porter, Sr., Fort Wayne; Harry G. Gradle, Kokomo; Walter U. Kennedy, Newcastle, and the discussion closed by Dr. J. Rilus Eastman.

Dr. A. C. Roope, Columbus, read a paper entitled "Thyroid Disease". This paper was discussed by Drs. F. H. Jett, Terre Haute; W. E. Klingler, Garrett, and the discussion closed by Dr. A. C. Roope.

Dr. Frank W. Foxworthy, Indianapolis, read a paper entitled "Diagnosis of Duodenal Ulcer". This paper was discussed by Drs. W. H. Foreman, Indianapolis; Miles F. Porter, Sr., Fort Wayne; H. O. Pantzer, Indianapolis; A. M. Hayden, Evansville; A. B. Graham, Indianapolis; H. L. Wheeler, Indianapolis; Albert M. Cole, Indianapolis; Thomas B. Noble, Indianapolis; C. F. Voyles, Indianapolis, and the discussion closed by Dr. Frank W. Foxworthy.

Dr. F. C. Walker, Indianapolis, read a paper entitled "Reconstruction of Perineal Genito-Urinary Childbirth Injuries". This paper was discussed by Drs. A. A. Rang, Washington; J. H. Weinstein, Terre Haute; G. D. Marshall, Kokomo; Charles J. Rothschild, Fort Wayne; G. B. Jackson, Indianapolis; Walter U. Kennedy, Newcastle; and the discussion closed by Dr. F. C. Walker.

Dr. E. E. Padgett, Indianapolis, read a paper entitled "Tuberculosis of the Female Generative Organs". This paper was discussed by Drs. Carl Habich, Indianapolis; G. B. Jackson, Indianapolis; James S. Shaffer, Terre Haute; P. C. McCown, Indianapolis; Karl R. Ruddell, Indianapolis; and the discussion closed by Dr. E. E. Padgett.

Adjourned.

SECOND MEETING

Pursuant to adjournment the Section on Surgery reconvened at nine-fifteen a. m. September 29th, with the vice-chairman, Dr. T. C. Kennedy of Indianapolis, presiding.

The first order was election of officers, which resulted as follows: Chairman, A. P. Roope, Colum-

bus; vice-chairman, G. B. Jackson, Indianapolis; secretary, Merrill S. Davis, Marion.

Dr. A. M. Mendenhall, Indianapolis, read a paper entitled "Occiput Posterior Positions: Early Diagnosis and Various Methods of Treatment". This paper was discussed by Drs. Clay Ball, Muncie; G. B. Jackson, Indianapolis; Homer Wollery, Bloomington; Charles J. Rothschild, Fort Wayne; Herbert D. Fair, Muncie; and the discussion closed by Dr. A. M. Mendenhall.

Dr. H. A. Duemling, Fort Wayne, read a paper entitled "Technique of Cholectectomy". There was no discussion of this paper.

Dr. Simon J. Young, Gary, read a paper entitled "Some Observations on Gall Bladder Surgery". This paper was discussed by Drs. E. S. Jones, Hammond; G. G. Eckhart, Marion; John H. Eberwein, Indianapolis; W. E. Klingler, Garrett; H. A. Duemling, Fort Wayne; Walter H. Williams, Lebanon; M. A. Austin, Anderson; and the discussion closed by Dr. Simon J. Young.

Dr. M. A. Austin, Anderson, read a paper entitled "Repair of Three Uncommon Fracture Cases, with the Use of an Original Crucifixion Splint in Fracture of the Surgical Neck of the Humerus". This paper was discussed by Drs. E. H. Clanser, Muncie; H. R. Allen, Indianapolis; G. D. Marshall, Kokomo; C. C. Cotton, Elwood; and the discussion closed by Dr. M. A. Austin.

Dr. G. D. Marshall, Kokomo, read a paper entitled "Diseases and Injury to the Hip Joint". This paper was discussed by Drs. C. C. Terry, South Bend; H. R. Allen, Indianapolis, and the discussion closed by Dr. G. D. Marshall.

Dr. H. R. Allen, Indianapolis, read a paper entitled "The Surgical Engineer". This paper was discussed by Drs. Louis D. Belden, Indianapolis; Walter H. Williams, Lebanon; William S. Ehrlich, Evansville; M. A. Austin, Anderson; G. D. Marshall, Kokomo; and the discussion closed by Dr. H. R. Allen.

Adjourned.

SECTION ON MEDICINE

FIRST MEETING

The first meeting of the Section on Medicine of the Indiana State Medical Association was called to order in the Hotel Roberts, Muncie, at 2:30 p. m. Thursday, September 28, 1922, by the chairman, Dr. George C. Richardson, Van Buren.

Dr. T. F. Bowles moved that a committee of three be appointed to draft resolutions on the death of Dr. Kimberlin, Dr. Wynn and Dr. Walker. Motion seconded and carried.

The chairman appointed a committee for this purpose consisting of Drs. Charles Good, Huntington; W. A. Fankboner, Marion, and Dr. Frank.

Dr. E. F. Kiser stated that he was heartily in favor of the motion but that a similar motion had been passed by the House of Delegates, and on motion duly seconded and carried Dr. Kiser read the resolutions that had been drafted by that committee.

Dr. Chas. P. Emerson moved that the committee from the Section on Medicine recognize these resolutions. Seconded and carried.

Dr. John H. Warvel, Indianapolis, presented a paper on "Some Observations on Cases Showing a Disturbance of Carbohydrate Metabolism".

This paper was discussed by Drs. B. M. Edlavitch, Fort Wayne; C. R. Strickland, Indianapolis; T. F. Bowles, Muncie; Allen Hamilton, Fort Wayne; C. A. Sellers, Hartford City; J. A. MacDonald, Indianapolis; C. F. Voyles, Indianapolis; and the discussion closed by Dr. Warvel.

Dr. O. G. Pfaff, Indianapolis, read a paper on "Congenital Pyloric Stenosis".

This paper was discussed by Drs. James C. Carter,

Indianapolis; W. D. Gatch, Indianapolis; Louis H. Segar, Indianapolis; and the discussion closed by Dr. Pfaff.

Dr. Charles Good reported that the committee to consider resolutions on the death of Drs. Kimberlin, Wynn and Walker had accepted the resolutions passed by the House of Delegates, but would like to send a copy to the families of the deceased suitably inscribed and placed in a dark green cover, green being symbolic of memory.

Dr. Alfred Henry moved that the report of the committee be accepted. Seconded and carried.

Dr. Alfred Henry presented a paper on "The Treatment of Pulmonary Tuberculosis".

This paper was discussed by Drs. G. C. Johnson, Evansville; Charles R. Bird, Greensburg; W. A. Evans, Chicago; John N. Hurty, Indianapolis; T. F. Bowles, Muncie; Chas. P. Emerson, Indianapolis; Geo. F. Beasley, Lafayette; Chas. S. Bond, Richmond; and the discussion closed by Dr. Henry.

Owing to the lateness of the hour it was moved and seconded that the paper of Dr. J. E. Luzadder be postponed until the morning session.

Adjournment at 5:45 p. m. to reconvene at 8:30 a. m. Friday, September 29.

SECOND MEETING

The second meeting of the Section on Medicine was called to order at 9:00 a. m. Friday, September 29, 1922, by the chairman, Dr. George C. Richardson, Van Buren.

Dr. J. E. Luzadder, Bloomington, read a paper on "The Therapy of Syphilis".

This paper was discussed by Drs. Chas. P. Emerson, Indianapolis, and Wm. S. Ehrich, Evansville.

At this point the vice-chairman, Dr. R. H. Beeson, Muncie, took the chair.

Dr. James Wynn, Indianapolis, presented a paper entitled "Sensitivity to Epidermal and Pollen Proteins; Diagnosis and Treatment".

This paper was discussed by Drs. C. G. Beall, Fort Wayne; Charles S. Bosenbury, South Bend; Oscar T. Scamahorn, Pittsburg; B. M. Edlavitch, Fort Wayne; David L. Kahn, Indianapolis; and the discussion was closed by Dr. Wynn.

Dr. Charles Louis Mix, Chicago, delivered the address in medicine entitled "Biliary Tract Infection and Its Differentiation from Ulcer". (No discussion.)

Dr. S. C. Waters, Middletown, presented a paper on "Epidemic Jaundice".

This contribution was discussed by Drs. W. M. Stout, Newcastle; Will P. Shimer, Indianapolis; W. A. Fankboner, Marion; W. W. Wadsworth, Muncie; C. A. Sellers, Hartford City; and the discussion was closed by Dr. Waters.

The chairman now resumed the chair.

Dr. W. A. Fankboner asked the consent of the Section and his discussants to have his paper read by title only and published in THE JOURNAL. On motion duly seconded and carried this consent was granted.

At the suggestion of the chairman a vote of thanks was tendered by the Section to the Muncie Academy of Medicine, the local profession and the management of the Hotel Roberts for their hospitality and efforts for the success of the meetings.

The following gentlemen were elected as Section officers for the ensuing year: Chairman, Dr. B. R. Kirklin, Muncie; vice-chairman, Dr. W. A. Fankboner, Marion; secretary, Dr. C. G. Beall, Fort Wayne.

Dr. Richardson introduced the newly elected chairman to the Section and announced that this was thought to be the largest meeting ever held by the Indiana State Medical Association, as there were approximately six hundred physicians in attendance.

He also announced that Terre Haute had been selected as the meeting place for 1923.

The chairman then introduced the newly elected President of the Association, Dr. Charles Good, to the Section and Dr. Good responded with a few remarks.

As this completed the program, on motion duly seconded and carried, the Section on Medicine adjourned at 12:40 *sine die*.

SECTION ON OPHTHALMOLOGY AND OTOLARYNGOLOGY

FIRST MEETING

The Section met in the Grill Room of the Roberts Hotel Thursday afternoon, September 28th, and was called to order at 2 p. m. by the chairman, Dr. C. H. McCaskey, who delivered an address. He selected for his subject "A Brief Review of Otology to the Beginning of the Nineteenth Century".

Dr. William B. Chamberlain, Cleveland, Ohio, read a paper (by invitation) entitled "Endonasal Operations on the Lachrymal Sac", which was discussed by Drs. G. W. Spohn, Elkhart; C. H. McCaskey, Indianapolis; Harry Boyd-Snee, South Bend; C. Norman Howard, Warsaw; Albert E. Bulson, Jr., Fort Wayne; C. J. Adams, Kokomo, after which the discussion was closed by the essayist.

Dr. Albert E. Bulson, Jr., Fort Wayne, read a paper entitled "Cycloplegics in Refraction Work".

This paper was discussed by Drs. A. L. Marshall, Indianapolis; R. W. Cochran, Madison; George F. Keiper, Lafayette; W. A. Hollis, Hartford City; O. G. Brubaker, North Manchester; Don L. Miller, Indianapolis, and in closing by the essayist.

Dr. F. S. Cuthbert, Kokomo, read a paper entitled "System and Thoroughness in Eye Examinations and Treatment", which was discussed by Drs. W. A. Hollis, Hartford City; G. W. Spohn, Elkhart; George F. Keiper, Lafayette, and Albert E. Bulson, Jr., Fort Wayne, after which the discussion was closed by the author of the paper.

On motion, the Section adjourned until 9 a. m. Friday, September 29.

SECOND MEETING

The Section met at 9 a. m. Friday, September 29, and was called to order by the chairman.

The following officers were nominated and elected: Chairman, Dr. C. J. Adams, Kokomo; vice-chairman, Dr. Harry Boyd-Snee, South Bend; secretary, Dr. E. M. Shanklin, Hammond, re-elected.

Dr. W. F. Hughes, Indianapolis, read a paper entitled "Cataract Extraction and Its Complications".

This paper was discussed by Drs. Frank A. Morrison, Indianapolis; G. W. Spohn, Elkhart; W. A. Hollis, Hartford City; B. W. Egan, Logansport; C. J. Adams, Kokomo; O. G. Brubaker, North Manchester, and in closing by the essayist.

Dr. W. S. Tomlin and Dr. D. S. Adams, Indianapolis, contributed a joint paper entitled "Phases of Chronic Laryngeal Infection", which was discussed by Drs. K. T. Brown, Muncie; G. W. Spohn, Elkhart; D. O. Kearby, Indianapolis; C. Norman Howard, Warsaw; Harry A. Van Osdol, Indianapolis; W. A. Hollis, Hartford City; Carl H. McCaskey, Indianapolis, after which the discussion was closed by Dr. Tomlin.

Dr. G. W. Spohn, Elkhart, read a paper on "Eye Drainage".

This paper was discussed by Drs. C. Norman Howard, Warsaw; D. O. Kearby, Indianapolis; W. F. Hughes, Indianapolis; Albert E. Bulson, Jr., Fort Wayne; Harry Boyd-Snee, South Bend, and in closing by the essayist.

As there was no further business, scientific or otherwise, to come before the Section, the meeting adjourned *sine die*.

THIRTEENTH DISTRICT MEDICAL SOCIETY

The 34th meeting of the Thirteenth District Medical Society was called to order by President B. F. Overmyer, at 1:30 p. m., September 1, in the pavilion of the Lakeview Hotel, Lake Manitou, Rochester, Indiana.

The minutes of the preceding meeting were read and approved. The treasurer's report was read and referred to the auditing committee. Drs. Charles Stoltz, Harry Knott and C. S. Campbell, who later reported it correct and on their recommendation it was accepted by vote of the society.

The nominating committee, Drs. C. E. Reed, E. O. Kreuger and G. W. Thompson, submitted the following ticket: For president, H. O. Shafer, Rochester; vice-president, J. N. Kelly, Westville; secretary-treasurer, James A. Work, Jr., Elkhart; councilor, C. Norman Howard, Warsaw. These candidates were elected by unanimous vote of the society.

The resolutions committee, Drs. J. B. Berteling, C. C. Terry and F. P. Eastman, presented the following resolutions on the death of Dr. Enos Musser Hoover:

WHEREAS, It has pleased Almighty God in His infinite wisdom and justice to call to his eternal home His servant, Dr. Enos M. Hoover,

THEREFORE, BE IT RESOLVED, That the untimely death of Dr. Hoover has been a loss to the medical profession because of his high medical standard, to his fellow citizens because of his sterling integrity, to his community at large because of his many philanthropic services, especially as member of the Anti-Tuberculosis Society and as president of the Child's Welfare League.

BE IT FURTHER RESOLVED, That the 13th District Medical Society extend to the family of the deceased and to his fellow citizens its profound sympathy and condolences.

BE IT FURTHER RESOLVED, That a copy of these resolutions be sent to the family of the deceased, to the press of Elkhart and Goshen and that the same be spread on the records of this, the 13th District Medical Society of the State of Indiana.

C. C. TERRY,
F. M. EASTMAN,
J. B. BERTELING,
Committee.

Rochester, Indiana, September 1, 1922.

The resolutions were accepted by vote of the society. The secretary sent copies to Mrs. Hoover and to press as instructed.

The invitation of the Marshall County Medical Society to hold the next annual meeting in Plymouth, made through Dr. Harry Knott, was accepted by unanimous vote of the society.

The report of the Committee on Constitution and By-Laws by Dr. C. N. Howard, chairman, was to the effect that the committee considered that no revision was necessary. Accepted by consent.

All committees were duly appointed by the president.

The following program was given: (1) "The Surgical Measures Employed for the Relief of Gastric and Duodenal Ulcers" (illustrated by lantern slides and operations on the dog)—E. A. Printy, Chicago. (2) "When Are Gastric and Duodenal Ulcer Cases Medical and When Surgical?"—B. F. Kuhn, Elkhart. Discussion: C. C. Terry, South Bend; Charles Stoltz, South Bend, and B. F. Kuhn, closing. (3) "Prenatal Care of the Mother"—C. L. Slonaker, Culver. Discussion: J. N. Kelly, Westville; E. O. Kreuger, Michigan City; C. G. Mackey, Culver; Charles Stoltz, South Bend; F. R. Clapp, South Bend, and C. L. Slonaker, closing. (4) "Obscure Headaches of Nasal Origin"—R. A. Barlow, South Bend. Discussion: J. B. Porter, Elkhart; C. N. Howard, Warsaw, and

R. A. Barlow, closing. (5) In the absence of Dr. C. C. Dubois, Warsaw, who was ill, Dr. Wm. Kelsey, Monterey, presented a few remarks on the treatment of diphtheria. Dr. Kelsey, aged 87, who has been practicing medicine 67 years, is the senior member of the society.

After an enjoyable hour spent in bathing in Lake Manitou and in visiting, the members banqueted at 6:30 at the Country Club. The after-dinner address was given by Dr. Vernon C. David, Chicago, on the subject, "Consideration of the Pathology and Therapy of a Few Rectal Lesions." Dr. David's paper was illustrated by lantern slides.

During the forenoon the golf-playing portion of the membership indulged in a variety of brands of that famous game commensurate with the number playing. So far as the secretary was able to determine the honors were impartially divided.

This meeting was the largest in the history of the society, having been attended by 86 members and visitors.

Adjournment.

JAMES A. WORK, JR.,
Secretary.

CORRESPONDENCE

Muncie, Ind., September 5, 1922.
EDITOR THE JOURNAL:

Several of my medical friends throughout the state have copies of my *Medical History* which were left with them for sale. Please say to these parties that I would be glad to have them return to me at my expense to Muncie, Indiana, any unsold copies.

Respectfully,
G. W. H. KEMPER.

TRUTH ABOUT MEDICINES**PROPAGANDA FOR REFORM**

Eto-So-Erc:—A circular letter, signed T. M. Berry, M.D., New Orleans, recommends the intravenous use of "Eto-So-Erc" ("Creosote" spelled backward) in the treatment of pulmonary tuberculosis, influenza, pneumonia, bronchitis and pulmonary gangrene. Eto-So-Erc is stated to be a "highly purified form of Beechwood Creosote, especially prepared for intravenous administration". It is asserted that "it comes in direct contact and becomes fixed to the pathologic tissue and bacteria". Creosote is credited with being of some value in tuberculous infections when taken orally. It is most probable that any benefits derived from the administration of creosote are due to the local effect on the alimentary canal, on the bronchitis and to the antipyretic action; hence, the benefits would not be obtained from its intravenous injection. The argument is advanced for Eto-So-Erc that, in respiratory infections, tubercle bacilli are destroyed by blood containing small amounts of creosote. This assertion is misleading because the tubercle bacilli in the lungs are embedded in the tissues and, therefore, are inaccessible to the creosote said to be contained in Eto-So-Erc. To give creosote, a readily absorbed drug, intravenously is irrational and unscientific.—(*Jour. A. M. A.*, Aug. 5, 1922, p. 492).

ZINC STEARATE DUSTING POWDERS.—Untoward effects from the accidental aspiration of zinc stearate dusting powder by infants are reported. In some cases, bronchopneumonia, of a more or less fulminating type, has ensued. In other infants, an acute toxemia was the most conspicuous symptom. The zinc stearate container, with its large perforations, as now prepared for the nursery, appears to be a distinct menace to the health of infants.—(*Jour. A. M. A.*, Aug. 19, 1922, p. 663).

THE "NATURAL HEALTH SCHOOL" seems to be the latest creation of Milo Erskine Yergin and his wife.

In 1920, Yergin was president of the "Co-operative Food Company". This concern advertised "Dr. Yergin's Pus and Pain Chart". The chart sold for \$10 and was advertised with the claim that it would enable one, "with the simple foods of nature", to control and obliterate completely, in from fifteen minutes to fifteen hours, any kind of pain and all pus conditions. The use of the chart required "Sea Food Baths", "Earth Food Table Salt", "Food Iodine", "Cinnamon Food Oil", "Myrrh Compound", and "Cold Food". All were for sale by the Co-operative Food Company at prices ranging from 25 cents to \$3 a package. The Natural Health School seems to combine a strong mixture of religious fanaticism with the practice of the healing art.

Yergin put forward a "True Musical Therapy" whereby, with the aid of a piano "thoroughly in tune and having high quality strings", it is possible to produce vibration rates corresponding to chemical elements! It is asserted that if the keys corresponding to mercury and chlorine are struck, a sensitive person will respond with a flow of saliva in the mouth. If the keys are kept sounding for a few moments, a bowel action will be started. The possibilities in treating stomachache, soft corns, psoriasis or smallpox by playing the piano seem unlimited. The preposterous nonsense promulgated by Yergin is, apparently, accepted at its face value by many laymen and not a few so-called "drugless practitioners". The harm that men of this type can do is realized when one reads of persons who are "treating" sufferers from tuberculosis, cancer and equally serious conditions by the fantastic principles laid down by Yergin, and by the nostrums sold by him.—(Jour. A. M. A., Aug. 26, 1922, p. 757).

HELIOTHERAPY.—The action of far ultraviolet light on normal tissue and the action of near ultraviolet light under certain pathologic conditions have been investigated enough to show that there are well defined effects due to light, closely related to the physiologic results of exposure to radium and the roentgen rays. Recently, Kramer, Casparis and Howland have again demonstrated the healing of the rachitic process in the bones of rachitic children through systematic exposure to the rays from the mercury vapor quartz lamp. The healing of the bones occurred at about the same time that it does after the administration of cod liver oil. The work of Finsen in the treatment of *lupus vulgaris* emphasizes the importance of considering a diversity of forms of radiant energy in skin affections. In tuberculosis, especially surgical tuberculosis, heliotherapy has long had advocates. Light of short wave length, which is known to have marked bactericidal effects, may not be without salutary influence in the treatment of wounds. Artificial lights, if glass covered, are therefore harmless and therapeutically weak. Sunlight rarely contains enough far ultraviolet rays to produce injury. Consequently, heliotherapy that demands highly potent effects must look to artificial sources of radiation. The quartz mercury arc and bare metallic arcs are known to belong in the potent class, and, it is to be remembered, may be extremely injurious, so that the eyes should be protected from them.—(Jour. A. M. A., Sept. 2, 1922, p. 827.)

INTRAVENOUS MEDICATION.—There are serious limitations to intravenous medication which are likely to be forgotten or overlooked in the enthusiasm for a promising procedure. They involve both disappointments and dangers. These were reviewed by Carl Voegtlin before the Section on Pharmacology and Therapeutics at the St. Louis session of the American Medical Association. Not the least in importance are the difficulties of technic which form a stumbling block for all too many physicians. Voegt-

lin pointed out that the chemical composition of the blood and its physicochemical properties, such as osmotic pressure, hydrogen-ion concentration and colloidal state, are maintained with remarkable constancy and appear to be essential to physiologic well-being. A sudden change in reaction, the production of precipitates and subsequent thrombosis in vital organs, the overwhelming of sensitive tissues, such as the cardiac and nervous structures, with high concentration of potent drugs, are a few illustrations of the untoward possibilities in a procedure that often means "more haste and less speed".—(Jour. A. M. A., Sept. 2, 1922, p. 828.)

LEACH CANCER CURE.—The Indianapolis Cancer Hospital is conducted by C. C. Root and C. A. McNeill. This was formerly called the "Parkview Sanatorium" and later the "Leach Sanatorium". This business was started by Leon T. Leach, mainly as a mail-order "cure" for cancer. When Leach's business was declared a fraud and debarred from the mails, the name was changed to "Leach Sanatorium". Later the name was changed to its present style and McNeill became president and Charles C. Root treasurer. As the list of those claimed to have been successfully treated by Root and McNeill appeared in Leach's old testimonials, one is justified in assuming that Root and McNeill use the Leach Method. At the time the federal authorities interfered with Leach's business, an analysis was made by the government chemists of the "cure". In effect, the report was:

"**CANCEROL BLOOD RENOVATOR.**"—This preparation was labeled in part: 'A compound of Essential Oils for the treatment of Malignant Diseases. Predigested Oils for internal administration.' The federal chemists reported that the stuff contained 10 percent of alcohol, a little more than 16 percent of total solids, almost wholly sugars, no alkaloids and no oils. It had an odor resembling sarsaparilla and senega. It was not a 'compound of essential oils', neither were there any 'predigested oils' present.

"**'Cancerol'.**"—This was nothing but cottonseed oil.

"**'Special Germ Killer and Disinfectant'.**"—This was a disinfectant of the creosol type and was to be used by diluting one teaspoonful in three pints of hot water. Bacteriologic tests showed that the solution, when diluted as prescribed, has little if any germicidal value.

"Pills."—These were colored red and sugar-coated; they were found to consist essentially of baking soda, iron (ferrous) sulphate, a small amount of red pepper and glucose.

"The above comprised the 'treatment' for 'internal' cancer; for 'external' cancer the victims received the Cancerol Blood Renovator and the Pills as described above and, in addition:

"**'Night Oil'.**"—This, like 'Cancerol', was found to be a small bottle of cottonseed oil.

"**'Day Oil'.**"—This was a half-ounce bottle of ichthyol.

"**'Prescription 16'.**"—Found to be an alcoholic preparation containing opium.

"**'Healing Salve'.**"—This, according to the federal chemists, was vaseline in which were incorporated boracic acid and bisinuth salts.

"**'De Vit-OI'.**"—This was a caustic paste—invariably used by the 'cancer cure' quacks—and contained 34 percent of arsenic."

FLUMERIN.—The Council on Pharmacy and Chemistry has published a preliminary report of Flumerin, the disodium salt of hydroxymercurifluorescein. A report on "Flumerin—A New Mercurial for the Intravenous Treatment of Syphilis"—was read before the Section on Dermatology at the 1922 meeting of the American Medical Association by Edwin C. White,

J. H. Hill, Joseph E. Moore and Hugh H. Young. The authors requested the Council to consider Flumerin with a view to its eventual admission to New and Nonofficial Remedies. The Council examined the evidence presented in the report of Dr. White and his collaborators and agreed with the authors that "the number of cases treated is sufficient to demonstrate that this mercurial is of value, but is too small to permit the allocation of the drug to a definite place in the therapy of syphilis". The American Medical Association's Chemical Laboratory examined the new drug and the tests and standards proposed for its control and reported to the Council that the chemical data appeared satisfactory. The Council reports that the acceptance of Flumerin for New and Nonofficial Remedies must await confirmatory clinical evidence; but because of the fact that Flumerin is a definite chemical substance and because of the evidence in the paper, a trial of it in selected cases may be warranted.—(*Jour. A. M. A.*, Sept. 9, 1922, p. 897.)

SOME ANALYSES FROM NEW HAMPSHIRE.—A recent "Food and Drug Inspection Number" of the *Bulletin of the New Hampshire State Board of Health* contains the following information in regard to the composition of nostrums: Potion Antilaiteuse (N. A. Sirois) consisted of a mixture of Epsom salt and powdered juniper berries. Chipwa Indian Root Blood Purifier (Lucy Royer) consisted of Epsom salt and two or three simple herbs, such as mandrake, spikenard and sarsaparilla. Best Catarrh Remedy (Lucy Royer) consisted of a dilution of tannic acid in glycerin. Nervtone Tablets (A. F. Schaubier) contained arsenic and strychnine. Angiolymphe du D'Rous (L'Angiolymphe Laboratory, Dr. P. Roux, Angiers, France).—A tuberculosis cure containing 1.5 percent solution in water of what is almost wholly sugar, with the possibility of the presence of a small amount of some glucosid. Noonan's Hair Petrole (T. Noonan & Sons Co.) contained 17.02 percent of alcohol, salicylic acid and about 12 percent of alcohol, salicylic acid and borax. A La Corbeille Fleurie Eau de Quinine Compound Hair Tonic (Ed. Pinaud) contained 65.75 percent of alcohol and a small amount of quinin. Parker's Hair Balsam (Hiscox Chemical Works) was a strong solution of lead acetate with sulphur. Hay's Hair Health (Philo-Hay Specialties Co.) was a solution of lead acetate with sulphur. Dr. Durand's Acne Hair Rejuvenator (Parisian Hair and Corset Stores) was a solution of lead acetate with sulphur. La Toilette Francaise (Elite Restorer Co.) contained 1.66 percent of alcohol, and was an ammonical solution of silver nitrate. Inecto-Rapid Gray Hair Remedy (Inecto, Inc.) was a hair dye of the two-solution preparations type, having hydrogen peroxid as one solution and paraphenylendiamin for the other. Gillespie Scalp Invigorator (Gillespie Mfg. Co.) contained 20.88 percent of alcohol, together with glycerin, borax and red pepper. Westphal's Auxiliator (Paul Westphal) contained 45 percent of alcohol, glycerin and borax. Woodbury's Combination Hair Tonic (John H. Woodbury) contained 26.59 percent of alcohol, with resorcin. Mme. Fried's Henna (Mme. Fried) consisted of henna or a similar herb with considerable copper and iron salts. Farr's Gray Hair Restorer No. 1 (Brookline Chemical Co.) contained an ammonical solution of silver nitrate. Wyeth's Sage and Sulphur Compound (Wyeth Chemical Co., Inc.) was found to be a solution of lead acetate with sulphur. Ess-Tee-Dee (Smith T. Dustin) was found to be a solution of arsenic with borax. Victor's Antiseptic Liquid Shampoo (T. Noonan & Sons Co.) was found to be essentially a solution of soap. Danderine (Knowlton Danderine Co.) was found to contain 8.77 percent of alcohol, together

with salicylic acid and borax. Flora de Lille Complexion Preparation (Flora de Lille Co.) was found to be a suspension of bismuth subcarbonate and calcium carbonate with borax. Champlin's Liquid Pearl (Champlin Mfg. Co.) contained 2.35 percent of alcohol and was a suspension of bismuth subcarbonate and calcium carbonate. Cooper's Complexion Beautifier (Cooper & Co.) was a suspension of bismuth subcarbonate and calcium carbonate. Pompeian Hair Massage (Pompeian Mfg. Co.) contained 15.03 percent of alcohol, with arsenic, borax, quinin and capsicum.—(*Jour. A. M. A.*, Sept. 16, 1922, p. 985.)

TETHELIN FAILS.—In 1916, T. Brailsford Robertson isolated from the anterior lobe of the pituitary glands of cattle a substance to which he gave the name of tethelin, and which he regarded as the active growth-controlling principle. Tethelin was hailed as a product capable of accelerating the healing of wounds and promoting recovery after inanition. Now a report has been published of feeding experiments carried out at the Institute of Physiology in University College, London, which failed to point to any influence by the oral administration of the anterior lobe substance on the growth of animals. When the manufacture of tethelin was taken up in 1918 by a pharmaceutical firm, the Council on Pharmacy and Chemistry considered the product. It was found that there was no adequate evidence for its value as a therapeutic agent, and hence the Council postponed definite action on the product until definite evidence had been obtained. Now, however, in part because of the unfavorable report of the English investigation, the Council has concluded the consideration of tethelin and declared it inadmissible to New and Nonofficial Remedies.—(*Jour. A. M. A.*, Sept. 16, 1922, p. 972.)

ANGOSTURA BITTERS.—Newspaper advertisements for Angostura Bitters state that Dr. W. C. Wile, formerly vice-president of the American Medical Association, testified that he used the preparation in his practice. Dr. Wile was fourth vice-president thirty-six years ago. Dr. Wile was in the nostrum business himself and wrote many testimonials. The attitude of the American medical profession toward such activities as those credited to Dr. Wile is entirely different today from that of thirty-six years ago. According to the label, Angostura Bitters is made from pure rum, containing about 45 percent of alcohol.—(*Jour. A. M. A.*, Sept. 23, 1922, p. 106.)

GRAHAM'S NEUTROIDS.—This alleged cure for obesity is put out by one R. Lincoln Graham, M.D., New York City. (Graham claims to be head of "the famous Graham Sanitarium" of New York City, where, it is said, a new method has been discovered by which the obese, though gluttonous and lazy, may reduce without abandoning either gluttony or laziness!) Graham declares that his nostrum contains "no thyroid extract, no free iodids—or harmful drugs of any kind". However, the A. M. A. Chemical Laboratory found Graham's Neutrōids tablets to contain impure iodid, 50 percent; magnesium carbonate, 43 percent; starch, 4 percent; talc, 3 percent; and iron, a trace. Iodid is tetra-iodo-pyrrol, which contains nearly 89 percent of iodin. It was formerly described in the U. S. Pharmacopoeia. Iodid is distinctly poisonous; even when it is applied externally, poisoning may occur.—(*Jour. A. M. A.*, Sept. 30, 1922, p. 1136.)

INTRODUCING A NEW DRUG—To what extent are the claims made for a new drug tintured by commercial considerations, even though put out as the result of investigations carried out by the scientific staff of a firm of standing? And even if the drug is the result of studies carried out by investigators who have no commercial connections there is the question: To what degree has the investigator's enthusiasm tintured his judgment? An increasing

(Continued on Adv. page xx)

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number of physicians abstain from the use of a new drug, until its acceptance for New and Non-official Remedies gives assurance that it is worthy of trial. What seems to be an almost ideal method of introducing a new drug has been followed in the case of "Flumerin", the name given to the disodium salt of hydroxymercuri-fluorescein. This drug has been elaborated by White, Hill, Moore and Young of Johns Hopkins. These men have declared the composition of the drug, have reported animal experiments of promise, and have demonstrated its efficiency in clinical trials. The investigators announce, however, that the drug will not be commercially available unless independent clinical study confirms their favorable finding that the drug is of value in the treatment of syphilis. That syphilologists may feel warranted to make such trials, Dr. White and his collaborators requested the Council on Pharmacy and Chemistry to examine the evidence for the preparation. This the Council did, and it has published a preliminary report, stating that the drug is suitable for clinical trial in selected cases. If Flumerin becomes an addition to our *materia medica*, it will be as the result of the orderly procedure: (1) demonstration of its chemical identity and uniformity; (2) animal experiments which give promise of therapeutic value; (3) clinical trials under the auspices of the discoverers, and (4) confirmation of its therapeutic worth by independent clinical investigations.—(*Jour. A. M. A.*, Sept. 30, 1922, p. 1149.)

NEW AND NONOFFICIAL REMEDIES

STERILE SOLUTION OF MERCURY OXYCYANIDE.—Each ampule contains 5 Cc. of solution, representing 0.008 Gm. ($\frac{1}{8}$ grain) of mercuric oxycyanide-N. N. R. For a discussion of the actions, uses and dosage of mercuric oxycyanide, see New and Nonofficial Remedies, 1922, p. 192. Gradwohl Laboratories, St. Louis.

LOESER'S INTRAVENOUS SOLUTION OF MERCURY OXYCYANIDE 0.012 GM.—Each ampule contains 5 Cc. of solution, representing 0.012 Gm. (3/16 grain) of mercuric oxycyanide-N. N. R. For a discussion of the actions, uses and dosage of mercuric oxycyanide, see New and Nonofficial Remedies, 1922, p. 192. New York Intravenous Laboratory, New York.

ANTIPNEUMOCOCCIC SERUM (POLYVALENT)-P. D. & Co.—Antipneumococcus Serum (see New and Non-official Remedies, 1922, p. 287) prepared from the blood of horses immunized with virulent cultures of pneumococci (Type I, II, III and Group IV) and standardized against Type I culture so as to be of the same strength as Type I serum. Marketed in piston syringes containing 50 Cc., with needle and connections. Parke, Davis & Co., Detroit.

LUMINAL SODIUM TABLETS 1½ GRAINS.—For a discussion of the actions, uses and dosage of luminal, see New and Nonofficial Remedies, 1922, p. 61. Winthrop Chemical Co., Inc., New York.—(*Jour. A. M. A.*, Aug. 19, 1922, p. 628).

POLLEN ANTIGENS-LEDERLE.—Liquids obtained by extracting the dried pollen of plants with a liquid consisting of 67 percent glycerine and 33 percent saturated solution of sodium chlorid. Pollen Antigens-Lederle are marketed in the following forms:

Series A: containing doses 1 to 5, inclusive (2.5, 5, 10, 20 and 25 pollen units, respectively).

Series B: containing doses 6 to 10, inclusive (30, 50, 75, 100 and 150 pollen units, respectively).

Series C: containing doses 11 to 15, inclusive (250, 375, 500, 750 and 1,000 pollen units, respectively).

Complete Series: containing 15 doses.

Diagnostic: containing 1 dose (100 pollen units).

Pollen Antigens-Lederle are employed in the diagnosis and treatment of hay fever (pollenosis). (See New and Nonofficial Remedies, 1922, p. 232). The following preparations have been accepted:

Arizona Ash Pollen Antigen-Lederle: Prepared from the pollen of Arizona Ash (*Fraxinus Toumeyi*).

Arizona Walnut Pollen Antigen-Lederle: Prepared from the pollen of Arizona walnut (*Juglans major*).

Black Walnut Pollen Antigen-Lederle: Prepared from the pollen of black walnut (*Juglans nigra*).

Careless Weed Pollen Antigen-Lederle: Prepared from the pollen of the careless weed (*Amaranthus palmeri*).

Cottonwood Pollen Antigen-Lederle: Prepared from the pollen of cottonwood (*Populus macdougalii*).

June Grass Pollen Antigen-Lederle: Prepared from the pollen of June grass (*Poa pratensis*).

Ragweed Pollen Antigen-Lederle: Prepared from the pollen of ragweed (*Ambrosia elatior*).

Red Top Pollen Antigen-Lederle: Prepared from the pollen of red top (*Agrostis palustris*).

Sage Brush Pollen Antigen-Lederle: Prepared from the pollen of sage brush (*Artemisia tridentata*).

Shad Scale Pollen Antigen-Lederle: Prepared from the pollen of shad scale.

Sheep Sorrel Pollen Antigen-Lederle: Prepared from the pollen of sheep sorrel (*Rumex acetosella*).

Slender Ragweed Pollen: Prepared from the pollen of slender ragweed (*Franseria tenuifolia*).

Sweet Vernal Pollen Antigen-Lederle: Prepared from the pollen of sweet vernal (*Anthoxanthum odoratum*).

Timothy Pollen Antigen-Lederle: Prepared from the pollen of timothy (*Phleum pratense*).

ADRENALIN TABLETS No. 2.—Each contains adrenalin (see New and Nonofficial Remedies, 1922, p. 109), 0.00033 Gm. (1/200 grain), as borate, yielding a 1:1000 solution when dissolved in 5 minimis of water. Parke, Davis & Co., Detroit.

HYPODERMIC TABLETS ADRENALIN AND COCAIN Rx B. (Cylindrical).—Each contains cocaine hydrochlorid, 0.005 Gm. (1/12 grain) and adrenalin (see New and Nonofficial Remedies, 1922, p. 109), 0.00005 Gm. (1/1200 grain). Parke, Davis & Co., Detroit.

BROMETONE CAPSULES, 5 GRAINS.—Each capsule contains brometone (see New and Nonofficial Remedies, 1922, p. 75). 5 grains. Parke, Davis & Co., Detroit.

CORPUS LUTEUM-G. W. C. Co.—The fresh substance from the corpora lutea of the hog, dried, freed from fat, and powdered. For a discussion of the actions and uses of corpus luteum, see New and Nonofficial Remedies, 1922, p. 208, under "Ovary". The product is also marketed in the form of tablets Corpus Luteum, G. W. C. Co., 2 grains. G. W. Carnrick Co., New York.

EPINEPHRIN-LEDERLE.—A brand of epinephrin-N. N. R. made from the suprarenal glands. For the actions, uses and dosage of epinephrin, see New and Nonofficial Remedies, 1922, p. 108. Epinephrin-Lederle is sold in the form of Solution Epinephrin-Lederle, containing epinephrin sulphite equivalent to 1 part of epinephrin in 1,000 parts of physiological solution of sodium chloride, preserved by a small quantity of sulphurous acid and saturated with carbon dioxide. Lederle Antitoxin Laboratories, New York.

HYPODERMIC TABLETS No. 50.—Mercuric Succinimide-Mulford, 0.012 Gm. (1/5 grain) contains mercuric succinimide (see New and Nonofficial Remedies, 1922, p. 194) 0.012 Gm. (1/5 grain). H. K. Mulford Co., Philadelphia.

MERCURIALIZED SERUM No. 2-MULFORD—For Intraparinal Use.—Each package contains the equivalent of 0.0026 Gm. (1/25 grain) of mercuric chloride in 30 Cc. of horse serum. For a discussion of the actions, uses and dosage of mercurialized serum, see New and Nonofficial Remedies, 1922, p. 189). H. K. Mulford Co., Philadelphia.

(Continued in November issue)

COMMERCIAL ANNOUNCEMENTS, ETC.

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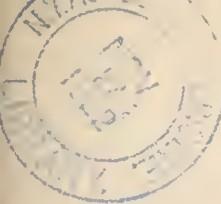
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VOLUME XV
NUMBER 11

FORT WAYNE, IND., NOVEMBER 15, 1922

Per Year, \$3.00
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CONTENTS

	Page	Page
ORIGINAL ARTICLES		
Billary Tract Infection and its Differentiation from Ulcer. Charles Louis Mix, Chicago.....	373	
Congenital Pyloric Stenosis. O. G. Pfaff, Indianapolis	378	
Epidemic Encephalitis After Effects. W. A. Fankboner, Marion	381	
The Therapy of Syphilis. J. E. Luzadde, Bloomington	385	
EDITORIALS		
Misplaced Medical Charity	391	
The Nursing Problem.....	392	
Dues and Their Uses.....	392	
Fees Paid by Insurance Companies for Medical Examinations	393	
Editorial Notes	394	
DEATHS		
J. Levi Lord, Mays; William L. Parr, Evansville; Reuben R. Tidrick, Bringhurst; Frank Randolph, Elkhart; Robert F. Palmer, Frankfort; Joseph B. Lenney, Crown Point; Henry E. Greene, Crawfordsville	400	
MISCELLANEOUS		
News Notes and Personals.....	401	
SOCIETY PROCEEDINGS		
Councilors' Membership Contest.....	403	
Kosciusko County	403	
(Continued on Page viii)		

Next Annual Session, Terre Haute, Sept. 26, 27, 28, 1923. List of Officers and Committees on Adv. Page 1. Entered as Second Class Matter, January 20, 1908, at the Postoffice at Fort Wayne, Indiana, under Act of Congress of March 3, 1879. Accepted for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized October 18, 1918.

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Next Annual Session, Terre Haute, September 26, 27 and 28, 1923.

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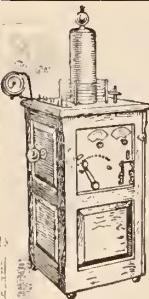
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THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF INDIANA

ISSUED MONTHLY under Direction of the Council

ALBERT E. BULSON, Jr., B.S., M.D., Editor and Manager

OFFICE OF PUBLICATION: 406 West Berry Street, FORT WAYNE, INDIANA

VOLUME XV

NOVEMBER 15, 1922

NUMBER 11

ORIGINAL ARTICLES

BILIARY TRACT INFECTION AND ITS DIFFERENTIATION FROM ULCER.*

CHARLES LOUIS MIX, M.D.

CHICAGO

By biliary tract infection I mean generic infection of the biliary tract. The infection may be a common-duct affair which usually is not secondary to gall-stones, or there may be an infection in the cystic duct which may obliterate it and give a much dilated gall-bladder containing a mass of mucus, or there may be an intramural infection of the gall-bladder which may be associated with stones, either cholesterin or calcareous stones. Usually the calcareous stones mean infection. The cholesterin stones are associated with pregnancy, cholesterin in the blood-stream, and similar etiologic factors. Of course there are cases where the infection proceeds still further into the liver with involvement of the hepatic duct and ultimately a cholangitis. When I say "biliary tract infection" I include all these pathologic entities in the generic term because I think that we must first conclude, in studying a given case, that the trouble lies in the biliary tract, and then subsequently determine what part of the biliary tract, by analysis of the case in hand, is infected.

Age has a great deal to do with gall-bladder symptomatology. Usually we find ulcers beginning in the young and biliary tract infection later in life. It is true that gall-stones have been found in babies and in young unmarried and married women, but it is not common for them to occur much before the age of forty. Biliary tract infection if diagnosed before the age of forty must be pretty well fortified by diagnostic arguments if it is to be accepted. The burden of proof is upon the one who insists that biliary tract infection is present in young individuals.

A very important point in the case history of patients with biliary tract infections is the matter of weight. It is a fact that biliary tract

infection, as a rule, does not produce emaciation. Every case of ulcer is apt to be associated with the loss of weight,—not necessarily, but I venture to say that 95 per cent. of these cases are associated with such loss. If you recall the ordinary run of patients with biliary tract disease you will agree that they are individuals who are fairly well nourished and past forty years of age. If you recall the patient with peptic ulcer, he is apt to be an under-nourished individual of less than forty. In cases where the ulcer has progressed for any length of time, emaciation is almost invariably present. The emaciation varies with the location of the ulcer. If it is situated in the stomach it produces more loss of weight than if it is located in the duodenum. On the duodenal side of the pylorus an ulcer is usually attended with only about a 10 percent loss. If, for instance, a patient ought to weigh a hundred and fifty pounds, he is apt to weigh one hundred and thirty-five if he has a duodenal ulcer. If the ulcer is in the duodenum, then the weight is apt to be constantly lower than normal. If it is in the stomach the patient is apt to have a fluctuating weight, more or less coinciding with the fluctuations of the ulcer. Ulcers on the lesser curvature side of the stomach produce more emaciation than those on the posterior wall, anterior wall, greater curvature or fundus.

Another important subject for inquiry in getting the history of the individual, besides age and weight, is the periodicity of attacks. No story of infection in the abdomen or of ulcer is complete without reference to the time development of the case. Those individuals who have ulcers of the duodenum always have periodic attacks. They are apt to occur as exacerbations in the spring and fall,—not necessarily, but likely so to occur. Patients with ulcer of the stomach have periods of attack and periods of freedom, but these are usually separated by much longer intervals, sometimes five or six years.

Attacks that occur from infection of the gall-bladder and biliary tract usually are at first associated with long intervals of freedom. A person may have an attack and not have another for two years, then another in one year and

(*) Address in Medicine given before the Section on Medicine of the Indiana State Medical Association, Muncie session, September 29, 1922.

the next in six months, the interval becoming constantly shorter until it may become a continuous performance.

The duration of the attacks is a matter of importance. In ulcer of the stomach the attacks are a matter of weeks. In ulcer of the duodenum the attack is usually a matter of three or four weeks followed by a period of calm. In gall-bladder infections the period of attack is short;—a matter of hours in the early cases, sometimes of two or three days. A person will be taken with a biliary attack and be quite ill, but within forty-eight hours will be back at work. Not so with a patient who has an ulcer of the duodenum. He is grumbling about his symptomatology for a month or six weeks at a time, and will then have a spontaneous remission for a month or two, finally to succumb to another seizure.

Always remember that stress must be laid upon the course of the case, because as you develop the history by questioning the patient it will occur to you that the disease in question is either ulcer or biliary tract infection in most of these abdominal disturbances, just from a consideration of the periodicity of attacks alone.

Very much more important than this matter of periodicity is the matter of pain. Practically all cases of ulcer are associated with pain. Very few of them are latent—very few indeed. There are some ulcers of the stomach which run a latent course, chiefly those with an onset of hemorrhage, but I do not think that you will ever find an ulcer of the duodenum in which latency is present. There are cases of biliary tract infection in which the early incidence of pain is rather infrequent and slight, but almost invariably pain will be present in the story.

There is one great difference between the pain of biliary tract infection and that of ulcer and that is the direction of radiation of the pain. One of the first questions is, "Where do you have the pain and what is its radiation?" As to mere location, the pain in biliary tract infection is not necessarily at the junction of the tenth rib and the costal border. It may be anywhere along the subcostal margin or in the back, but it is almost invariably somewhere in the right upper quadrant. In ulcer cases the pain may be seated in the epigastrium, and sometimes even in gall-bladder cases it is so situated; hence it happens at times that when you inquire into the mere matter of location of the pain you are more or less up in the air so far as coming to a definite conclusion by location alone is concerned, but when you inquire as to the *radiation* of the pain you begin to get valuable information.

In ulcer of the stomach the pain is never radiated into the thorax, whereas in biliary tract affections such radiation is the rule. There is a reason for this, and the explanation is to be

found in the relationship of the subdiaphragmatic ganglion. This is a unilateral ganglion, located beneath the right lobe of the liver, and in the transverse fissure, and it is connected with sympathetic nerve fibers plus pneumogastric fibers and phrenic nerve fibers. The phrenic nerve is not merely the motor nerve of the diaphragm. It contains many sensory fibers, some going to the root of the neck, some between the shoulder-blades in the back, some to the right pleura, some to the pericardium, some to the mediastinum, some above and some beneath the diaphragm. Whenever there is irritation from infection of the peritoneum in the transverse fissure of the liver there is apt to be, because of this sympathetic relationship, a reflex pain somewhere in the thorax. Hence, it happens that some attacks of biliary tract infection may be associated with pain in the mediastinum, some with pain between the shoulder-blades, some with pain in the back, neck or chest. Some of the attacks may be thought to be pleurisy in the early stages, but they are really due to disturbance in the biliary tract and are caused by phrenic nerve reflex pain. Many of these infections involving the subdiaphragmatic ganglion are hematogenous in origin, but many of them are borne by lymphatics from disease elsewhere in the abdomen. Thus biliary tract disease may be secondary to ulcer in the region of the pylorus, being borne by the lymphatics, or it may be hematogenous as in typhoid fever.

When I first studied medicine I was either led or permitted to believe that germs had the power of making their way through the down-flowing bile current up into the gall-bladder. This is nonsense since germs have no way of propelling themselves against the descending stream. But just as indigo blue can ascend the lymphatics in the walls of the common duct, floating in the lymph, in precisely the same way germs may make their way by the lymphatics to the transverse fissure of the liver and so affect the subdiaphragmatic ganglion and its component nerve tracts.

With this understanding it is easy to comprehend the direction of the radiation of the pain and the immense aid which it is in diagnosis. In biliary tract infections thoracic radiation of pain is the rule and in ulcer of the stomach or duodenum it does not occur. Of course when biliary tract infection complicates the later stages of ulcer, the history of pain marks its advent. You then have the picture of early pain in the epigastric region followed in later months or years by pain in the territory of distribution of the phrenic nerve supply in the thorax.

There is another important factor concerning pain and that is its type. It may be from either one of two sources: either a peritonitic pain due to pericholecystitis or perigastritis, or it

may be a rhythmic unstriped-muscle fiber pain, due to spastic contraction. It is evident that pain which is due to the rhythmic over-contraction of unstriped muscle fiber may occur in many cases of biliary tract infection, and it is not difficult to pick out a pain of this sort from others. If you ask the patient for a description of the pain he or she can usually well describe the rhythmical contraction of unstriped fibers around the gall-bladder or common duct so that you can distinctly differentiate it from the pain of peritoneal origin, or you may come to the shrewd conclusion that the pain is peritonitic, due to adhesions between the gall-bladder and the duodenum even before the x-ray plates have been prepared.

Of further differential value is the fact that pain due to inflammation of the peritoneum always has associated with it tenderness and soreness on pressure, whereas pain due to unstriped muscle-fiber contractions is relieved by pressure. Thus, again, there is a means of telling what sort of pathologic process is responsible for the pain.

A final matter for inquiry in regard to pain is of importance and that is the time of pain with reference to the time of meals. A pain which comes on at any time, irrespective of meals, is apt to be peritonitic, and of biliary tract origin. A pain due to disease of the stomach, either ulcer or otherwise, or to ulcer of the duodenum, has a time relationship to food. Usually in cases of frank ulcer of the stomach the pain immediately follows the taking of food but that is not true of ulcers on either side of and close to the pylorus. The ulcer close to the pylorus if situated on the gastric side has exactly the same symptomatology as on the duodenal side, and there is no means which I know of by which, from a history of pain alone, one may differentiate ulcer on the gastric side from that on the duodenal side of the pylorus. This is because the pylorus contracts down with a good deal of power on the sore ulcer on either side of the pylorus, and so causes the pain. The pain in duodenal or pyloric ulcer coincides with the empty stomach. As soon as food is put into the stomach it immediately starts through the relaxed pyloric ring; with the relaxation of the pyloric ring, the pain is gone, but as soon as the stomach is empty, two or three hours after a meal, the pyloric sphincter begins to contract down upon the ulcer and the pain begins once more. Invariably in these cases of duodenal ulcer, if something is put into the stomach, even a drink of water, a little bicarbonate of soda or a drink of milk, it will relax the pylorus and stop the pain.

If the ulcer is on the stomach wall the pain appears within half an hour. Its appearance is usually very prompt, and if the ulcer is on the anterior wall it is very prompt indeed. We can now frequently decide clinically as well as

by the x-ray plate where the ulcer is located. If it is in the fundus the pain is apt to be prompt and it will last as long as food is in the stomach and is irritating the ulcer. If the patient vomits and the contents are thrown out the pain ceases, but if in the case of a duodenal ulcer the patient should provoke vomiting the pain would begin just so much sooner because the pain is due to contraction. If there is a saddle ulcer involving both sides of the pylorus the pain begins two hours or so after eating.

Such a time relationship is not true of gall-bladder pain. Such pain has no relationship to the taking of food. It may occur at two o'clock in the morning. The first attacks of onset are very apt to be nocturnal. Subsequently they may occur at any time. The patients are absolutely uncertain as to any relationship between the taking of food and the pain and this fact should arouse the suspicion of biliary tract infection.

Another very important topic for inquiry in taking the patient's history is vomiting. Of course it is important to know whether vomiting is present or absent and if present it is very important to know all about it. Does it take place promptly after a meal? Or does it occur remotely after a meal? Does it take place once or twice? Does it cease after expulsion of food or does it continue? If it continues does it lead to vomiting of bile? If so, how long does it last? Are there six, seven, eight or nine attacks of vomiting or just one? A great deal depends upon the answer to these questions. In ulcers of the stomach the patient stops vomiting as soon as the contents are out. The reason is obvious: as soon as the food is out the patient is relieved. You have the same thing in carcinoma of the stomach—the stomach contents are expelled and the patient is easier. Such vomiting is a defense symptom.

In case of an ulcer on the gastric side of and close to the pylorus vomiting does not take place. If there is food in the stomach the patient is comfortable for then the pyloric sphincter is relaxed and does not pinch the ulcer. Such a patient gets to be a night feeder, with a glass of milk at his bedside so that he may take it during the night. It would be a very foolish thing on the part of Nature to dump the food out in these cases. The thing to do is to keep food there and the pylorus relaxed. Hence in an ulcer in this location absence of vomiting actually aids the patient. Never in a case of pure, uncomplicated ulcer of the pylorus does vomiting take place. If it does occur it is because there is peritonitis, and then reflex vomiting may, of course, occur.

If the ulcer is on the lesser curvature vomiting is extremely common and practically the rule, the reason being that ulcer on the lesser curvature is located at the maximum development of the nerve supply, a place where reflex

vomiting is most apt to take place. The patient with ulcer of the greater curvature will not vomit much. The law of vomiting in lesser curvature ulcers was illustrated in the case of a man thirty-four years of age who had a gastrojejunostomy done last Thursday. He vomited a great deal, such vomiting suggesting lesser curvature ulcer, and when he had his fluoroscopic examination we thought we saw the ulcer at the lesser curvature and at operation we found a large ulcer on the lesser curvature close to the pylorus. The gastrojejunostomy had to be done because he had a gastric retention. The frequency of the vomiting in his case led to the conclusion that the gastric ulcer must be on the lesser curvature.

Patients with biliary tract infection may have vomiting or they may not. If vomiting is present it is always of food first and then bile. If you think of a patient with gastric ulcer, does he vomit bile? No. He vomits food first and then he stops, unless there be an added associated peritonitic symptomatology. The biliary tract patient vomits six or seven times, or maybe more, and he always ends by vomiting bile. Like the patient with a tabetic crisis, he has a series of vomitings and toward the end nothing but bile comes up. I am of the opinion—I may be wrong, and will cheerfully say I may be—that the vomiting is after all a reflex anastalsis in the duodenum, due to a disturbance of the law of reciprocal innervation, whereby bile passes backward through the pylorus into the stomach where it acts as an emetic just as does ox gall, and causes repeated vomiting of bile. Of course, there are those who say that you can short-circuit the bile-duct and conduct bile right into the stomach and not get vomiting. Perhaps the argument is valid. Yet, I believe it is a reflex peritonitic disturbance which leads to the vomiting, and I think there is always in this group of cases a reversed duodenal anastalsis, sweeping bile into the stomach, and causing repeated emesis.

Some facts in patients with abnormal pyloric rings are interesting. Occasionally you encounter patients with biliary tract infection who show gastric anacidity. Most patients with biliary tract infection show hyperacidity when you make the Rehfuss test, but in some patients with biliary tract infection alkaline duodenal contents without bile regurgitate into the stomach, neutralizing the acid, and so causing anacidity. I saw a case just the other day in which I am sure that the anacidity was entirely due to a widely relaxed pyloric ring. Even five hours after the meal there was evidence that the duodenal contents were regurgitating into the stomach and producing neutralization of the hydrochloric acid.

Of very great differential value is the question of general infection. An ulcer of the stomach is an end-result or end-product of infection.

A gall-bladder infection is very different. What is the history, for example, in a patient suffering from ulcer of the stomach and duodenum? Never, in these cases, do we get a history of coated tongue, headache, chills and chilly sensations, arthritis, neuritis, febrile attacks, or an increase of the leukocytes. In the biliary tract infections some of these conditions are always present. In a given case of disease of the right upper abdominal quadrant when you ask yourself, "Is it a case of infection or not?", you are really asking yourself, "Is it biliary tract infection or is it not?"

In a patient with ulcer headache is the exception. You do not find the coated tongue but the clean tongue—the hyperacid tongue which many clinicians have noted. Such patients are not subject to arthritis unless they have some other source of infection. They are not subject to neuritic pains and febrile seizures; they do not have attacks associated with chilly sensations or with rigors. You never find the temperature above normal. You never find an increase of the white cells when you make the leukocyte count. These things come only in biliary tract infections. It frequently happens that one is able to make a diagnosis by these considerations alone. I recall the case of a woman treated by a very prominent physician in Buffalo some years ago for ulcer of the stomach. She had an infection of the gall-bladder which was operated upon and cured and the diagnosis was based upon signs of infection and particularly an infectious headache. When carefully questioned she recalled symptoms which she had not reported to any physician previously because her attention had not been directed to them.

There are many cases in which the whole symptomatology may be reflex and gastric and it is difficult for one to make out the differential diagnosis in such cases, but if you can discover evidences of focal infection, you are readily rewarded in the diagnosis.

Of course, the laboratory helps much in these cases. It is your duty in every case of disease of the stomach to find out as much as possible by laboratory methods. My method is the Rehfuss, not the old Ewald method, for I think the latter is inadequate. If you pass a Rehfuss tube and get eight or ten specimens collected at half-hour intervals and examine them carefully you will obtain a set of findings from the stomach which are of great importance. Of course, we expect a hyperacidity in most cases of ulcer of the stomach and in most cases of infection of the biliary tract, but not necessarily so in the latter.

Very important also, and we never omit it, is the careful examination by the x-ray because you will obtain by the x-ray, as a rule, confirmation of the clinical diagnosis if the examination

is carefully made. I am one of those who believe that the physician should be present at every fluoroscopic examination of his patients. He need not be there when the plates are made, but he should watch the barium making its way into the stomach and out through the pylorus, and should have a very good general idea of what is going on in the stomach and upper part of the abdomen at the time of the fluoroscopic examination. You cannot describe things by word of mouth, and seeing it yourself is worth much more than many reports. Then after the plates are made, the immediate, the half-hour and the five-hour plates, you can inspect them and compare them with what you saw in the clinical examination.

Is the physical examination of much importance? Not really very much. But you have to differentiate these diseases from others in the right upper abdominal quadrant. As a rule, ulcer of the stomach and biliary tract infection are not associated with palpable findings. There is only a tenderness and slight soreness in the region of the morbid process. Ulcer of the stomach is usually associated with an area the size of a quarter or a half dollar, sometimes an area as small as a dime, and that tender area locates the ulcer. Ulcers of the duodenum present a larger area of tenderness which lies to the right of the midline and above the umbilicus. Patients with biliary tract infection show tenderness and soreness, usually close beneath the right costal margin. It is not fair to press your fingers deep into the abdomen, and then, because he winces, say that he has an infected gall-bladder. I would not wish a physician to press too vigorously my right subcostal area, because he would doubtless hurt me, and then I might be suspected of having some gall-bladder infection. Always be fair in the examination. When you make pressure on one side press equally on the other—"Where is the pain?" "Is it more intense on one side than on the other?" "Is it only on one side?"

If you decide upon a diagnosis of biliary tract infection it may be one of many things. It may be a morbid process located within the gall-bladder or it may be an intramural cholecystitis. Many patients with biliary tract infection present symptoms which have come on abruptly. Such patients with acute symptoms coming on within a few hours may have to be hurried to the hospital for examination and eventual operation. Chronic cases of gall-bladder infection may or may not be associated with gall-stones. Sometimes the x-ray, as in the beautiful collection of plates which Dr. Kirklin has here on exhibition, will show the stones or it will show the outline of the gall-bladder with adhesions to the somewhat distorted duodenum. Sometimes the gall-bladder shadow is itself distorted by reason of such adhesions, and the duodenal cap is frequently distorted by traction. In many

instances you may be wholly unable to say whether the cholecystitis is or is not associated with cholelithiasis. Dependent upon the type and degree of infection, is a possible decision to treat the case surgically or medically.

I do not believe in gall-bladder drainage, certainly not by the oral method and usually not by the surgical method. If drainage alone is done it does not give good end-results. The patient after any but a very prolonged surgical drainage is within two or three years much the same as when first operated upon. For this reason cholecystectomy has come into general use rather than cholecystotomy, and many surgeons will not drain the gall-bladder because it will not give relief sufficient to warrant its adoption as a standard operation.

There are certain places where stones in combination with infection produce very spectacular results. When infected stones are at the neck of the gall-bladder they may produce a very typical fever which was described by Charcot and is known as the "angular fever of Charcot". If anywhere in the body there is a point where a great deal of infectious material can be poured into the blood-stream within a short time the effect is comparable to a catheter chill or to the chill following the introduction of vaccine into a vein. There is a very abrupt and usually a high rise in temperature. Wherever infection is suddenly introduced into the blood, as in the case of the corpus spongiosum from urethral catheterization, or in the thrombosis of veins in Peyer's patches in typhoid fever previous to hemorrhage, or in stones associated with traumatization and infection of the rich network of lymphatics at the neck of the gall-bladder, there is a very sudden rise in temperature, and a very sudden drop. The rise may start at noon time and run to 103 degrees F. and be normal at six o'clock. This "angular fever of Charcot", found in these gall-bladder infections, is almost pathognomonic of infection of the neck of the gall-bladder, so that we are able to formulate the conclusion at times of a stone in the neck of the gall-bladder with purulent infection.

If the infection of the gall-bladder be an abscess with blockade of the cystic duct, so that the stone is imprisoned, there are signs of sepsis with a large gall-bladder, denoting empyema. In these cases there is added to the biliary tract symptomatology with all the signs of sepsis with definite enlargement of the gall-bladder. Enlargement alone, without sepsis, may indicate merely hydrops of the gall-bladder.

I have said what I wished mainly to say, namely, that in general if one pays attention to the facts of age, weight, periodicity, pain, its location and radiation, its character—as to whether peritoneal or caused by unstriped muscle spasm; vomiting, its character and its association with bile, the time of vomiting, the matter of examination of the stomach contents by

the Rehfuss test meal and all the x-ray examinations, and above all to the collateral evidence of infection—if, as I say, we pay attention to all of these things, we shall be able to differentiate the great bulk of our cases, both gastric and duodenal, from biliary tract infection in general. Of course, the higher our percentage of successes with this differentiation, the better for the patients because we shall not be led to do wrong things. We shall not be putting gall-bladder cases upon an ulcer diet, which is so frequently done time after time, especially in those cases of biliary tract disease in which the gastric symptoms are paramount. The most important differential point which I can mention as differentiating between ulcer and biliary tract infection is the question of infection—headache, arthritis, neuritis, fever, chilly sensations, leukocytosis, and coated tongue as distinguished from the red, acid tongue of ulcer.

CONGENITAL PYLORIC STENOSIS*

O. G. PFAFF, M.D.

INDIANAPOLIS

In this brief presentation I cannot discuss at length the nature of congenital pyloric stenosis, nor the related condition known as pylorospasm. That this condition occurs with much more frequency than was formerly believed is undoubtedly shown by the experience of pediatricians in large clinics, and in private practice; we know that this condition is actually congenital inasmuch as well marked instances have been found in the unborn fetus, even as early as the seventh month of gestation.

Until recent years the condition when recognized was regarded as little more than a calamitous curiosity. An occasional case was operated on with discouraging mortality, until the genius of Fredet and Rammstedt devised the procedure which bears their names, and which has placed us in firm control of this heretofore fatal malady.

Without referring to the ultimate etiology, we have to deal with a condition of actual obstruction due to an enormous hypertrophy of the pyloric sphincter. This hypertrophy, of fetal origin, progresses with more rapidity after birth as a result of the institution of normal feeding which increases muscular activity with its concomitant hypernutrition and the resultant great thickening of the muscular ring.

The symptoms of obstruction rarely begin before the tenth day and more frequently in the third week of life; some cases not manifesting themselves until as late as two months.

The onset is usually quite sudden; the vomiting of food is uncontrollable, persistent, and projectile in type; the stomach contents being violently discharged to the distance of from one

to three feet or more. Preceding the vomiting there are persistent peristaltic waves (which are plainly visible) evincing the attempts of the stomach to overcome the obstruction. These waves flow from left to right and follow almost immediately the ingestion of food, and are in turn directly followed by the characteristic projectile vomiting. Constipation is marked. From the onset of these characteristic symptoms there is a rapid loss in body weight from food and fluid starvation, and the inevitable tendency is towards death.

The diagnosis is not difficult. The projectile vomiting coming on at the characteristic time, and persisting (in spite of the administration of atropine, which appears to be a panacea for uncomplicated pylorospasm), is enough; but in addition to these conclusive signs there is a small tumor in the upper right quadrant which can be very plainly palpated in many but not all cases. The diagnosis once made, no time should be lost. The child's vitality should be conserved by immediate action which in itself is no heroic ordeal. The Rammstedt operation is both simple and safe and the results ideal. Ether is advocated by some surgeons and I used it in one case, however the free injection of one-half percent novocaine is thoroughly satisfactory and is certainly safer. The abdomen is opened by a two-inch incision to the right and above the umbilicus; the pylorus is drawn into the wound and the thickened muscle which forms a tumor much the size and shape of an olive is grasped by the thumb and index finger of the left hand. Choosing the most avascular area, a longitudinal incision is made through the peritoneum and the hypertrophied muscular fibres down to the delicate pale submucosa, which must be approached with great care, as wounding the mucosa is a complication which may well be disastrous. Much stress has been laid upon the importance of spreading the sides of the pyloric incision by means of forceps so that the mucosa shall bulge well up between the walls of the cut. However, I believe that if the muscular fibres are carefully and completely separated by clean, accurate incision, spreading the walls of the cut is not necessary. When a sphincter muscle is divided there ensues a contraction of both cut ends towards the middle which invariably spreads the gap. I relied on this principle in the cases which were referred to me and the results have strengthened this belief. The remaining step in the operation is the careful closure of the abdomen by layer sutures, reinforced by silk-worm gut, and adhesive strips.

I will offer a brief report of four typical cases occurring in the practice of Dr. Jas. C. Carter, upon which I did the Rammstedt operation, which was followed in each case by a prompt recovery with a complete cure of all symptoms.

(*) Presented before the Surgical Section of the Indiana State Medical Association at the Muncie session, September, 1922.

Case 1—G. A. K., weighed 7 pounds at birth; no serious disturbance for two weeks, when violent vomiting after meals began and persisted with regularity. It was of the projectile type and was preceded by well marked peristaltic waves from left to right; loss of weight was promptly manifest until the baby weighed 4½ pounds. A small tumor could be felt above and to the right of the umbilicus. Pyloric stenosis was diagnosed and under ether the Rammstedt operation was performed. The relief was immediate. Some occasional vomiting occurred which I explained on the theory that a few muscular fibers had been left which constricted the pylorus, until they gave way under the much stronger contraction of the divided pyloric strands of muscle. The improvement was rapid and steady; in three months it weighed 10 pounds and in 5 months later it weighed 19 pounds 9 ounces and has since then become a big healthy infant.

Case 2—H. H., male, born Sept. 17, 1921, birth weight not noted; no serious disturbances until the beginning of the second month, when it began to vomit after feeding, at first in moderate amounts, which progressively increased in spite of atropine. Constipation was pronounced; the vomiting assumed the projectile type; the peristaltic waves after feeding were marked. On Nov. 1st the weight was 12 pounds and by Nov. 11th it had decreased to 9 pounds. Consent to operation was given and under novocaine the Rammstedt was performed. The vomiting and other untoward symptoms at once disappeared and the child began to gain in weight at the rate of approximately 7 ounces a week, so that at the end of seven months it weighed 19 pounds and has continued further normal increase since that time.

Case 3—H. W. L., male, born Feb. 13, 1922. When three weeks old began to vomit after feeding and was treated six weeks with various artificial foods after having been weaned. The weight dropped from 12 to less than 7 pounds; the projectile vomiting, peristalsis, constipation, etc., established the diagnosis. The emaciation was extreme, the infant appearing to be little more than a living skeleton. It seemed to be almost a hopeless case and the mother strongly objected to an operation but eventually consented as a last resort. A Rammstedt was done under novocaine on April 27th. During the ensuing 36 hours there were a few spells of moderate vomiting and it then ceased entirely. The gain in weight began at once, and I received a letter from the family physician, dated Aug. 28th, just four months after the operation, stating that the baby now weighs 16½ pounds, a gain of 10½ pounds.

Case 4—S. W., male, born April 14, 1922, birth weight 9 pounds 12 ounces. At the end of the third week it began to vomit violently after feeding and was very constipated; the

characteristic peristalsis was plainly visible and the small tumor was felt in the right upper quadrant. On May 22d the weight had decreased to 7 pounds 12 ounces, a loss of two pounds. The Rammstedt was done and the baby was taken home two days later and made a rapid and complete recovery and is now a hearty, well developed infant.

In closing this brief presentation of such an important subject, I will summarize by calling attention to four points:

1st.—These cases occur with more frequency than is generally believed, probably the most of them being overlooked.

2nd.—The diagnosis is not difficult.

3rd.—The treatment is surgical.

4th.—The Rammstedt operation is simple, safe, and the results are brilliant, gratifying and permanent.

DISCUSSION

DR. JAMES C. CARTER (Indianapolis): Please do not gather from what Dr. Pfaff has said that all vomiting babies have pyloric stenosis, and please if you do suspect pyloric stenosis do not take them off the breast. In so doing you have lost the best therapeutic agent for recovery that you have had, that is, the best therapeutic agent after the operation. Every baby spits up more or less. That is not vomiting. In the pyloric stenosis cases the vomiting is of the projectile type, as Dr. Pfaff stated, and the youngster frequently throws food three or four feet. Ordinary vomiting is due to over-feeding and can easily be corrected by reducing the time of nourishment or the amount of food which is given if he is on artificial diet. If you suspect stenosis in any given case I would strongly advise that you take the time to see the baby fed and that you see it fed when it is stripped. You cannot diagnose pyloric stenosis with two or three layers of napkin, a shirt and a dress. If you feed the baby and then watch the abdomen you will see the waves. The men who have written the most about this subject tell you that you can feel the tumor itself in every instance. I do not believe this is true. You may find the tumor mass if you look long enough.

The constipation that is associated with pyloric stenosis is very marked. It indicates the decreased amount of food that is going through and that is one of the important points of the diagnosis. It has been my pleasure to see nine cases, one of which may have been a pylorospasm. Seven of these cases were operated upon and five of them are alive. There is one case of pylorospasm that may have been pyloric stenosis that was not operated and when not operated died. The child was under my care at the time and we were using atropin treatment and were getting results, an increase in weight and so on, but one morning—I don't know whether I had some baleful influence or

not—while I was standing beside the bed looking at it the child proceeded to die right then and there.

The treatment other than surgical which is of most benefit is, first the use of atropin in 1 to 1000 solution. You can safely give up to fifteen drops of such solution preceding feeding without getting any flushing of the face or excessive dryness, although you work up to this one drop at a time.

If you have a true pylorospasm and no stenosis you will get benefit from this method. You will not cure the vomiting but will get enough food through to get an increase in weight and general benefit.

The feeding of thick cereal has been much written about, as was advocated by Sauer of Evanston, and he gets results, but he gets results because he lays down this rule which he never deviates from, that when the baby has lost one-fourth of its birth weight then it is operated, and that rule holds absolutely good. Otherwise, you will have a youngster that nothing will bring back.

Dr. Pfaff neglected to say in his paper that the essential point of the operation is speed, in getting in and getting out. We must avoid shock and not take everything out of the abdomen and have a look. We must get in and out as speedily as is consistent with good operating. Do the operating and then quit.

Another important thing is the restoration of body fluid. In the four cases Dr. Pfaff operated for me we filled the abdomen with salt solution and then put the baby back to bed with a glucose drip. We started the feeding as soon after the operation as we thought practical. The feeding cannot be told about in advance, and we feed them until we get up to what we think proper to get our increase in weight.

DR. W. D. GATCH (Indianapolis): As has been emphasized, there are two classes of cases for which a surgeon may be consulted: the simple pylorospasm and the cases of true hypertrophy of the pylorus. While there might be a mistake clinically about which class you are dealing with, there can be no mistake after the abdomen is once opened, because one of these hypertrophic cases presents a mass of gristle-like cartilage as large as your thumb. Whatever results may be reported from medical treatment, it is hard for anyone who has seen one of these cases to believe that anything short of dividing this thick mass could bring about relief of the symptoms.

I think Dr. Pfaff's excellent results have been procured by his sticking to the proper kind of case. They have all been of the hypertrophic class. I think it is a question whether we should operate on a simple pylorospasm. The results in such cases are very different and apt

to be questionable. I know I lost one case of the spastic variety and would hesitate to operate on one of that kind again.

I speak of the differential diagnosis between the two types of obstruction in all modesty, as one who is not a specialist in the diseases of children. In the cases of true hypertrophy which I have observed the distension has been limited to the upper portion of the abdomen. The intestines have been empty. In the cases of pylorospasm there has been distension of the intestines. Whether this holds true in all cases I do not know.

I am glad that Dr. Pfaff emphasized the fact that he cuts down to the submucosa and no farther. In a good deal of the literature the statement is made that the incision is carried to the mucosa. If you do that you get into the bowel. The submucous coat is the only layer of the bowel that has any strength. The mucosa and muscularis are friable, but the submucous coat is a strong one. Some think it is terrible to leave nothing but this membrane between the child and destruction, but as a matter of fact you weaken the bowel in this operation very little. Experiments have shown that in infants this will stand a pressure of sixteen pounds.

There are two or three points in the technic that are interesting. In my own experience I have had more trouble in closing the abdominal wall than in doing the operation on the stomach itself. The wall is so thin that you are in constant danger of wounding something. I think one of the dangers after operation is evisceration. That can be avoided by making the incision very high, so that when you close the abdomen the large liver of the child will come down behind and keep the intestines from pushing out. I think this is a valuable point.

I have attempted once or twice to close over the pyloric incision with omentum or something else, but it is very difficult. There is very little to close over and it seems to be unnecessary. The adhesions that form there do very little harm. I am informed that some of these cases have recovered and have later come to autopsy from another cause, and it has been discovered that the enormous mass of gristle-like cartilage has disappeared.

DR. LOUIS H. SEGAR (Indianapolis): I believe Dr. Gatch has sounded a worthy word of warning, insofar as the diagnosis of congenital stenosis is concerned. Dr. Pfaff said the diagnosis was easy. The open-and-shut case of congenital pyloric stenosis is easy, where you have projectile vomiting, visible peristalsis, starvation stools, emaciation, progressive loss of weight and palpable tumor. There you have an obvious case for surgical interference, but a good many of the babies that one sees with projectile vomiting, and with visible peristalsis, with loss of weight and starvation stools, are not cases of

pyloric stenosis. Those cases sometimes go to the surgeon but the result is in a good many instances distressing. Great care should be taken in the differential diagnosis between pyloric stenosis and pylorospasm. The baby, from the clinical standpoint, presents just the same clinical symptoms in the one instance as in the other. The roentgenogram does not help. Watching the baby's peristaltic waves through the abdominal wall does not help. There is only one way in which you can make an absolutely definite diagnosis between spasm and hypertrophy, and that is to feel the tumor. As Dr. Carter aptly said, many times you cannot feel the tumor. Then what shall you do? You have a little wiggling, crying baby to examine, and if you can stop this wiggling and crying you can find the tumor more easily. You can do this by means of a general anesthetic. Three times I have put a baby under general anesthesia and it has been possible to feel a tumor that was not otherwise palpable.

There is one thing that must be considered in making a diagnosis of congenital pyloric stenosis with the idea of operating, and that is whether the stenosis is complete or incomplete. Dr. Sauer has been unusually successful in the treatment of pyloric stenosis which was not a complete obstruction, by the use of thick cereal feeding, by mixing farina with breast milk and feeding that with a spatula or some other instrument. If the obstruction is incomplete the babies do well and do not need surgery.

The diagnosis is not always easy. It sometimes requires anesthesia to feel the tumor, and if the obstruction is not complete the case is not surgical.

DR. O. G. PFAFF (closing): I believe the matter of diagnosis is not so difficult after all. I think all cases of persistent projectile vomiting which are due to pylorospasm and not to stenosis will yield to the use of atropin—or nearly every case. If they do not yield to atropin and the patient continues to lose weight, I believe when a loss of 25 percent is reached they should be operated. When it is due to pylorospasm I believe there is a defect in the muscle, and the spasm is possible because of this defect. I think if the muscles are divided in such a case we have every right to believe that they will not obstruct and that we have a cured case, even if it is not an organic hypertrophy.

Months or years after these operations some children have died from other causes, and when a postmortem has been held in a few instances, as Dr. Gatch mentioned, they have shown a disappearance of the tumor and almost complete disappearance of the scar.

As to closure, it is sometimes difficult, but I think we should take enough time to close these little fellows up as we do any abdominal case,

getting the muscle and fascia together with catgut, then the skin with silkworm gut sutures placed far enough from the margins and left in position long enough to get a complete healing.

EPIDEMIC ENCEPHALITIS AFTER-EFFECTS*

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The mortality of epidemic encephalitis is around 20 percent. Maybe one-third of the survivors recover in from six to twenty-four months. The other two-thirds show either a persistence of troublesome symptoms or some type of organic after-effects. These conditions vary through the scale of physical and psychic abnormalities, from a slight tic to an extensive paralysis; from mental hebetude to insanity.

The most serious lesions occur in the brain stem, the pons and medulla. The gross pathological features are congestion, edema, hemorrhages, petechial and larger, and a doughy consistency of brain tissue. Microscopically the small hemorrhages are shown as more numerous. There is cellular infiltration of the adventitia of the smaller vessels, perivascular exudation, a dense perivascular cellular infiltration, a more sparse cellular infiltration of the white matter; at times evidence of destructive action even into the nuclear areas, sometimes the evidence of connective tissue proliferation, and sometimes the evidence of a reconstructive effort.

The damaging effects of the disease can be appreciated properly only when we keep in mind the character of the pathology and the area of its greater intensity. Congestion, edema, extravasation, infiltration and hemorrhage are all pressure factors. Fibrous tissue is also a pressure factor, but of a different nature from those mentioned, and producing its effect later. Toxin effect is primarily one of chemical irritation. Out of all these factors may arise a confusing array of symptoms, from a diagnostic point of view, and from a failure of resolution most disastrous after-effects may occur.

From current literature at my command I make the following abstracted references:

One report on 75 cases six months after an epidemic. In a general way these patients complained of general weakness, lack of energy and initiative, some headache or sense of fullness in the head, mental dullness and lack of power of concentration, and showed delusions and mental deterioration. There occurred motor disturbances manifest by local spasm, choreiform movements, partial pareses in the oculo-motor area and optic nerve weakness, general convulsions

(*). Presented without reading before the Section on Medicine of the Indiana State Medical Association at the Muncie session, September, 1922.

and hemiplegia. In some cases paralysis agitans symptoms appeared, and these were the most persistent.

A report on 92 cases, one to three years after the acute attack, shows about 9 percent fully recovered and 15 percent not fully recovered but able to work. Of this 15 percent, ten patients had residual cranial nerve symptoms, four had tremor of the tongue and extremities, and all had insomnia, irritability, depression or headache. Two of the whole series were stationary. Of the total 66 percent were in a serious condition. Forty-two of these, almost half of the total series, were of the paralysis agitans type. The remaining twenty were slowly progressive, showing various manifestations.

A report on 78 cases, six to eighteen months after the acute attack, shows a mortality and a recovery of about 25 percent each. Among the other 50 percent there was exhibited a variety of manifestations embracing asthenia, both mental and physical, with much retarded processes in both fields of activity; mental disturbance, some to the condition of insanity; insomnia; partial unilateral facial paralysis; tremors of the face and tongue; clonic rhythmic contractions of the muscles of mastication; epileptiform convulsions, hemiplegia and paralysis agitans symptoms.

A report on 145 cases, 90 of which were acute with a death rate of 26 percent. The surviving acute cases with 55 chronic cases in the series makes 115 cases for study of after-effects. Of these about one-third were considered well. The other two-thirds exhibited asthenia, myoclonic phenomena and twitchings, neurasthenia and psychasthenia, psychoses resembling dementia praecox, ophthalmoplegia, difficulty in swallowing and trembling about the lips and tongue, and paralysis agitans symptoms. Two patients developed a glycosuria likely due to irritation at the fourth ventricle.

I report on personal information the following ten cases:

Case 1. Mr. S., age 34. Came to my office Jan. 22, 1921. General attitude and expression one of unusual fatigue. For a few days had been seeing double. Five days previously a slight nausea one day, not persistent. For a week unusually fatigued. There was no pain at this time and was not during his whole illness. Confined to bed two months. Took no solid food for seven weeks—could not masticate and swallowed liquids with great difficulty. For six weeks could not articulate, and most of the time made no sound whatever. For ten weeks could not change position of the body. There was a marked persistent general spasticity. Twelve weeks from the beginning of his illness he could manage to walk, showing some spasticity.

His general symptoms in order of incidence were nausea, weakness, drowsiness, lethargy, shivers during the second week, of sufficient intensity to shake the bed, and spasticity. There appeared early, ophthalmoplegia and expressionless face. A little later general spasticity, coarse tremors, increased heart and respiratory rate. His respiration was nasal and somewhat noisy on account of spastic closure of the mouth. He seemed entirely oblivious to his environment, was aroused only by insistent sharp urging, opening the eyes slightly and immediately lapsing into lethargy. His motor symptoms ran the whole gamut of the cranial nerves and into the long tracts of the arms and legs. His mental symptoms were only a slight delirium during the second and third weeks.

There was not a complete paralysis of any function. General spasticity was a persistent feature. Applied effort at passive motion was resisted. The teeth were set. The legs were in constantly slight flexed position. The arms were kept in a repose position across the chest in a spastic state, with the wrists and fingers slightly flexed. If the arm were lifted away from the chest by an attendant it retained the flexed position and would remain away from the body until replaced by the attendant. Any motion that might be attempted by the patient was attended by a marked aggravation of the coarse tremor.

In four and a half months from the beginning of his illness he was able to begin light work, gradually doing more, and has worked continuously since. He tires more easily than before his illness and lacks initiative and power of concentration. In a general way he is physically well and is mentally clear. The only patient thing left eighteen months after the beginning of his illness is a slight unilateral tic at one corner of the mouth.

Case 2, Mr. L., age 36. Encephalitis, December, 1919. First three days hallucination and insomnia. For the next five weeks mildly lethargic but able to keep at work as shipping clerk in a paper house, at times walking into objects or against the wall. Later insomnia developed and from lack of endurance and loss of power of concentration he had to quit work. He came to me in March, 1921. The insomnia has persisted to the present time. He never sleeps more than three hours at a time and that infrequently. He goes to bed and rests without any pain or distress. He is mentally clear. About three months ago he tried to work where his duty was to take a miscellaneous lot of small machine parts and put them in boxes, each kind in a separate box. He would get them mixed and had to quit. At present he is night watching in a small factory and tells me he has a feeling of uncertainty as to his doing the work right. There are no pains, twitchings

or spasticities. He carries his right arm in the position of a paralysis agitans, but there are no tremors and he has good use of the arm. There is a slight tremor in the right cheek. He has good use of his whole body, but motion is very much slower than normal, sometimes a suggestion of a shuffle in the walk. His general appearance is one of dejection.

Case 3. Mr. W., age 35. No premonitory symptoms. A mild persistent ptosis, with weakness and lethargy, and no other manifestations. He could be easily aroused but immediately went off into lethargy and remained so for one month night and day. There was an uneventful complete recovery.

Case 4. Mr. M., age 19, was seen in consultation with Dr. Hawkins, Swayzee, Indiana. The case at the time was acutely toxic. The temperature had been 103, but had fallen to 100. He did not seem seriously ill, had a mild broken delirium and insomnia. When approached in conversation was rational. Later lethargy developed. He made a complete recovery, but it was six months before he could do a day's work without undue fatigue. During convalescence there was much eye fatigue which he attempted to correct with glasses without results. The eyes came right with the general condition.

Case 5. Mr. M., age 50, seen with Dr. Hawkins. This case presented a very early paralysis agitans condition of a very marked type. There were no prodromata or early suggestive symptoms of a lethargic type of encephalitis. Was this a case of epidemic encephalitis not giving rise to the early characteristic symptoms? The patient died early in the illness.

Case 6. Miss X., age 30, seen in consultation with Dr. Newell of Converse, Indiana. This case was of the meningeal type. There was ptosis and diplopia. Severe pains occurred in the head, neck and shoulders. There was a constant broken delirium. Death occurred early.

Case 7. Miss Y., age 21, reported to me by Dr. Erle Daniels, Marion. First week vomiting three days, beginning headache which became progressively worse. At the end of this week diplopia. During the second week cramps in the legs, delirium, lethargy, spasms of the muscles of the neck and some shivering attacks. Right side of face somewhat flattened out and complete ptosis of right eye. There was later difficulty in swallowing. This case was of the meningeal type. Death occurred early,—in two weeks.

Case 8. Mr. McA., age 44, reported by Dr. E. O. Harrold, Marion. This was an ambulatory case showing the classic features of asthenia, weakness, lassitude, mental sluggishness and lethargy. There was diplopia and moderate ptosis but no other localizing symptoms. The initial symptoms appeared early in March, 1922. He now complains of dullness of vision,

constant drowsiness, immediate fatigue on moderate exertion or excitement, little initiative and less endurance. In a general way he appears well. Mental processes are slowed down. He has lack of interest, enthusiasm and concentration. He conducts his business but by forced effort. In his words, he feels like he had "a sack of cement on his head".

Case 9. Mr. T., age 16, reported by Dr. Frank Brown, Lafontaine, Indiana. This case had early naso-pharyngeal catarrhal symptoms. He thought he had "something the matter with the eyes" and before seeing his family physician, consulted an oculist. The early general symptoms simulated typhoid fever. There was a little later, diplopia, ptosis and a lethargy lasting three weeks. There was general spasticity during three weeks. The convalescence extended over two months with complete recovery.

Case 10. Mr. T., age 18, reported by Dr. Brown, presented much the same characteristics as case 9, and came to complete recovery.

The following nine cases are at the Marion National Sanitorium. I was given access to these cases and their histories through the kindness of Dr. Wm. MacLake, medical director and superintendent. I wish to acknowledge also other courtesies extended by Drs. Gilfillan, Murray and Cook of the sanitorium staff.

May I digress for a moment to state that the Marion National Sanitorium accepts only mental and nervous cases occurring among soldiers of the Spanish-American and World wars. Ninety percent of its over 800 patients at present are World war veterans. The institution is complete in every facility, embracing all necessary laboratories, excellent well directed equipment for the therapeutic application of electricity, baths and vocational training. It has a capacity for 1,094 patients. The personnel of the staff embraces thirteen physicians, each a specialist in his line of work, and three dentists.

With these cases I mention but little of their history and describe somewhat briefly their present condition.

Case 11. Mr. K., age 33, dull, apathetic, mask-like expression, stands with stooping posture, head forward, arms and hands partially flexed; will sit for hours with hands on chair arms, seldom moving his head, will answer questions slowly—sometimes the effort to answer is attended with pursed, tremulous lips without any sound being made; all muscular action slow and difficult. He has a left partial hemiparesis, some spasticities and some coarse tremors.

Case 12. Mr. R., age 28, apathetic, weak, walks slowly with somewhat shuffling gait, words come slowly and monotonously, mask-like face, marked tremor of tongue and face, some stiffness of neck muscles, will lie on his bed most of the day if allowed to do so, is reasonably cheerful, waits on himself and helps with the work about the ward.

Case 13, Mr. R., age 32, always tired and exhausted, stands with head forward, fixed flexed elbows and hands, with hands against the thighs, dragging, difficult gait with short steps, great difficulty in turning, all movements stiff and awkward, some general spasticity, some difficulty in swallowing, tremor of the tongue, eyelids, hands and fingers, expressionless face, dull mentality.

Case 14, Mr. T., age 30, is an ambulatory case. He says that at times he is unable to open his mouth and cannot use his tongue well, unable at times to talk but knows what he wants to say, and is very nervous. He has a coarse, general tremor worse in the right arm and a static face when in repose.

Case 15, Mr. M., age 41, marked dullness and apathy, a decided slowness of physical and mental processes, speech labored and muffled, difficulty in swallowing, a slow spastic shuffling gait, general tremors, slight ptosis, diplopia for near objects, at times the mouth slightly open, corners retracted showing the teeth, usually an expressionless face. At one time I saw this patient holding a cup of coffee to his mouth with both hands, apparently rigid without any evidence of motion, and the whole appearance could well have been the form of a man carved out of inanimate material. He is volitionally practically a blank.

Case 16, Mr. M., age 22, has the staring, flat face, the attitude and gait of paralysis agitans, general hypertonicity, slow, hesitating speech. He will sit up all day unless told to go to bed, or will spend most of the day on the bed. He exhibits catatonic phenomena—cannot carry out suggestions such as putting on his coat or fastening his shoes. He will start the act and stop in the effort until urged to proceed.

Case 17, Mr. G., age 28, is another paralysis agitans type. He is listless, depressed, hypochondriacal, lies in bed many hours a day, eats slowly, difficulty in feeding himself, coarse tremors, speech usually retarded but sometimes free and clear. He says that the top of his head is pushing up.

Case 18, Mr. T., age 30, was in the Indiana National Guard from 1914, and in the World War one year, advancing to the grade of second lieutenant. He was mustered out in November, 1919. He later began work but was much depressed, felt worried, had pains in the back and legs and could not sleep. He worked until September, 1920, but irregularly on account of his physical condition, and none since. Before becoming helpless he could not stand erect or hold his head up in normal position. For the past twenty months he has been in bed helpless, lying on his back, with legs partly flexed, feet in partial extension, arms at his sides, hands across the chest, with flexed wrists and fingers.

He cannot move, but if any movement is attempted it is attended by a marked tremor. He cannot talk, has great difficulty in swallowing and when taking his liquid food makes a continuous, pronounced moaning sound with a fear accent. His appearance suggests a general loss of flesh, but aside from this there are atrophic changes in one leg, with partial ankylosis. His face is without expression and he shows no interest in his environment. This is another case of the statue effect.

Case 19, Mr. C., age 27, presents the paralysis agitans attitude but without tremor—motion is very slow but smooth. In feeding himself the spoon travels from dish to mouth very slowly, the mouth is closed with extreme deliberation, mastication and swallowing being performed in the same manner. The face is blank, with the mouth slightly open. He answers questions promptly and intelligently but with very slow, measured speech.

These sanatorium cases are a most interesting group. All developed in the service or very shortly after, and this time element makes them more reliable as a basis for prognosis. This, however, is not promising. None of them as yet are showing any marked improvement, but at this time their residence at the sanatorium is of too short duration to know fully what may be expected from the well directed care and management they are receiving.

I have referred briefly in this presentation to 390 cases reported in medical journals, 10 cases occurring in the practice of Grant county physicians, and 9 cases in the Marion National Sanatorium—409 cases in all. A great diversity of clinical manifestation occurs, as might be expected when we keep in mind the area most involved in the pathology. There is the possibility of one case presenting practically the whole range of symptoms. There may be in any given case manifest involvement of only the oculo-motor area, with diplopia and moderate ptosis, or the manifestations may indicate an extension through the pons, giving rise to facial symptoms, or still farther downward into the medulla, giving rise to disturbances of mastication, swallowing, and disturbances of heart and respiratory rate, or the meninges or cortex may be so involved as to give rise to the predominant symptoms.

The one outstanding feature of practically all cases is a slowing down of both physical and mental activity. Muscles that are not paralyzed will respond to volitional impulses—but often with marked slowness and hesitation. The mentality is usually clear but hesitating and slow. Practically 50 percent of all cases present the paralysis agitans type of syndrome. The other 50 percent as a group will show physical and mental hebetude, with retarded response, lack of endurance, loss of initiative, interest and

power of concentration, localized or more general twitchings, choreiform movement, spasticities, localized or more general, pareses, partial or more marked, local or more general.

This latter group is in a way the more pitiable because of their likely greater mental alertness. They come to a realization of their serious condition and suffer from the consciousness of it. The first group no doubt suffer from a like consciousness of their condition. They are so often the picture of abject despondency.

In many of these cases there is a social and physical history which suggests a fundamental status out of which might develop some of the phenomena seen in convalescence and later. The dementia *præcox* symptoms, the extreme types of neurasthenia and psychasthenia may more easily appear from excitation of a previous predisposition. This type of predisposition has been found in cases of shell shock and other calamitous experiences of soldiers on the firing line.

The various manifestations that occur in the acute stage, the stage of convalescence, or as true after-effects, are the logical outcome of a severe inflammation of nerve tissue. The damage is essentially interstitial. The nerve cells are not usually, in the earlier stages, directly affected. Repair fibrosis in nerve tissue is often progressive and this may contribute to the disastrous results. The after-effects in this disease are not always due to a loss of function of ganglionic centers but to an interference with the transmission of impulses.

Ultimate recovery in a large percentage of cases is questionable. It is yet too early to arrive at entirely satisfactory conclusions. We have ahead of us a period of study and collaboration. The convalescence is so protracted and the end results as far as observed are so persistent and intractable that our data will not carry the value we would like until another year or two.

THE THERAPY OF SYPHILIS*

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"Know syphilis in all its manifestations and relations, and all other things clinical will be added unto you," says Sir William Osler. In other words this disease has been said to be responsible for one-third of pathology, is the chief factor in organic disease of the nervous system, and one of the principal causes of insanity, being responsible for 12 percent of the 200,000 cases of insanity in the United States. Syphilis is often a factor in the etiology of epilepsy, diabetes, Bright's disease and cirrhosis of the liver, as well as a predisposing cause of cancer and tuberculosis. We are told that 10

percent of our male population has syphilis, congenital or acquired, and that 10 percent of the dermatoses are specific.

The discovery of the spirochete, the Wassermann test and salvarsan may be aptly called "the German syphilitic trinity". These discoveries have advanced our knowledge considerably; but, on the other hand, they have made clinical diagnosis, the highest attainment in medicine, take a back seat, with rather disastrous results, and we must view with concern the decadence in our ability to make clinical diagnosis, and the tendency to depend entirely upon the laboratory.

It would appear, for practical purposes, that there probably is no appreciable time during which a syphilitic infection can be regarded as confined to the focus of entry, but that immediately infection takes place the spirochetes begin to multiply and invade the surrounding tissues, gaining access to both the lymphatics and the blood stream, and are widely distributed over the body even before the initial lesion can be detected.

To combat this spirochete and thus prevent syphilis, we may consider the chemical and the constitutional methods. As to the former, the efficacy of calomel or other spirocheticides, in the so-called chemical prophylaxis of syphilis, is limited to a period of not more than eight hours after the spirochete has had the opportunity of invading the healthy person. Regarding the constitutional method, the German and French literature contain reports of the successful use of arsphenamine in the prophylaxis of syphilis. This procedure has been instituted in this country. The doses selected are small and administered prior to the appearance of the initial lesion in persons who are definitely known to have been exposed to syphilitic infection. The results of this prophylactic treatment are encouraging.

To assist us in the diagnosis of syphilis comes the Wassermann reaction, and of the many epoch-making discoveries in medicine, few outrank the Wassermann test in their significance and in their usefulness, especially when lesions of the viscera develop. This test is of great value in the diagnosis of obscure constitutional maladies. We would say, in matters of particular diagnosis, that the Wassermann test is a good servant but a bad master; a valuable aid, since it proves that the patient is suffering from syphilitic infection in some form or other, but a danger if taken to indicate that any and every lesion which can be seen on the patient is syphilitic. With all respect to the dark field illuminator in the primary lesions, and later the Wassermann test of blood and spinal fluid, too much emphasis cannot be laid on the fact that in many cases of syphilis, as in any disease, a diagnosis can be made, and must be made, by clinical signs and symptoms.

(*) Presented before the Section on Medicine of the Indiana State Medical Association at the Muncie session, September, 1922.

In the year 1910 salvarsan came on the market—a yellow powder, 31 percent of which is arsenic. Within a few years dozens of deaths were reported as being caused by salvarsan. A preparation of arsenic containing 20 percent, called neosalvarsan or neoarsphenamine, was marketed. One fact about the arsenical preparations must be borne in mind, namely, that they will render infectious lesions organism free in the course of a few hours; from a public health standpoint this is of the utmost importance. The injection of cloudy or turbid solutions of neoarsphenamine will almost invariably give rise to severe nitritoid symptoms in which syncope and shock-like collapse are the outstanding features. Neoarsphenamine should never be given unless the solution be perfectly clear. The more concentrated the solution the greater the danger. The effect of 0.45 grams of neoarsphenamine is magical when applied locally to a chancre, or intravenously. One dose 0.45 grams neoarsphenamine will in 24 hours cause the destruction of all accessible spirochetes in the body. Mercury may be given 10 days to equal an arsenical in this respect.

The histological findings in cases of death from neoarsphenamine shows the toxic effect to be chiefly exercised on the endothelium of capillaries. Chronic headache, loss of weight, which are occasionally displayed in the fifth and sixth doses of neoarsphenamine, are signs of intolerance and one should be on his guard. Exfoliative dermatitis is rare. Broncho-pneumonia may complicate and is particularly fatal. Jaundice is less frequent than dermatitis, and is very persistent. Severe cerebral symptoms characterized by intense headaches followed by mental confusion, epileptiform convulsions, coma, and in some cases death, have been recorded by a number of writers. They have become much less frequent recently, probably due to greater caution exercised as to initial dosage and care regarding the purity of solutions. Should a patient experience a bad result, he should be bled, take saline purgatives and bland liquids. Ichthyol gr. V twice a day in capsules is indicated in pronounced dermatitis; also ichthyol ointment 10 percent. Calamine lotion is a relief.

Hemorrhagic encephalitis may occur after injections of neoarsphenamine in any stage of syphilis, and in otherwise healthy subjects. It does not appear to depend on the dose. This condition is a grave one, and is usually fatal unless treatment is promptly administered as soon as the condition is recognized. This treatment consists in:

- (1) Intramuscular injection of 1 to 1½ cc. of adrenalin 1 to 1000.
- (2) Phlebotomy to 20 ounces.
- (3) Lumbar puncture, with removal of 20 cc. cerebro-spinal fluid.

In syphilitic meningitis the headache may require aspirin—or it may be so severe as to require opiates; although it usually will yield to some form of specific medication.

A hemiplegia occurring suddenly, with symptoms of apoplexy, should be treated with absolute rest, ice packs to the head and liquid diet. Massage, hydrotherapy and electricity may be used to advantage in treating the permanent paralysis.

Gummata of the brain may require treatment other than specific, according to the location, number and size, and the symptoms produced. Numerous investigators have practiced surgical procedures on brain gummata with more or less success. If a certain diagnosis of brain gumma has been made and it does not yield to specific treatment, and further, if the tumor is in an accessible position, surgery should be tried.

Many substitutes have been brought forward to supplant mercury, only to pass into oblivion, until now even in spite of the recent tremendous assault by arsphenamine, it still reigns supreme. The use of mercury in the treatment of syphilis enjoys an undisturbed position. In order to avoid gastro-intestinal derangements mercury should be given intramuscularly, for if given intravenously toxic conditions may arise. The beneficial effects of mercury internally are due to the actual destruction of the infecting organism by the mercury itself, as well as to the stimulation of the formation of anti-bodies. One grain of mercury is often sufficient to carry the patient seven days. The role of mercury in the combined treatment would appear to be rather that of an agent which can safely be retained in the tissues, and by which the effects of the arsenical preparations are maintained for long after the latter has been excreted. Neither can it be said syphilis can be cured by the arsenical preparations alone, but the negative reaction may result from the combined drugs.

When the kidneys are diseased it is necessary to watch the urine carefully to see that mercury, which has a great affinity for the cells of the kidneys, is not adding to the toxic effect of any arsenical preparation which may be used in combination, and, altogether, the regular examination of the urine is a necessary part of the syphilitic treatment. Wolffenstein, working under the A. M. A., in 1913 reviewed all the fatal therapeutic mercurial cases since 1883, and reported 108 in number. A certain risk accompanies the administration of mercury and arsphenamine simultaneously, so that for a continuous effect to be obtained, periods of mercurial treatments alone should alternate with periods of treatments with arsphenamine alone.

May we do honor to iodine? It is fairly certain iodine does not act on the spirochete, since in primary and secondary syphilis it does not

cause these parasites to disappear from the various lesions, nor does it influence the Wassermann. Iodine neutralizes the action of the agents, which prevents resolution and absorption of the diseased or necrotic tissue, and at the same time lays bare to the action of the real germicidal agent the infecting organism, which previously had been protected by necrotic tissue. With the exposure of the infecting organism, such agents as mercury and the arsenicals would be much more effective. Iodine absorbs newly formed connective tissue, upon which depends its virtue. Syphilitic tissue is connective tissue. In the early stages of syphilis such tissue encapsulates the spirochetes and therefore the latter are inaccessible to arsenic and mercury in the blood stream.

For ordinary syphilis the hot springs are comparatively valueless.

In early cases the spirochetes are many, widely disseminated and cause little or no tissue destruction. Organisms accessible to the specific drugs are destroyed and in favorable cases cures effected. In a large percentage of cases, however, the treatment is not carried out in an intensive fashion, and as a result the organisms persist in the viscera, cardio-vascular or nervous system, and slowly cause tissue reactions and degenerations.

It is a mistake to imagine that the treatment of syphilis consists only in the administration of a certain amount of salvarsan, mercury, intrimine and the iodides. To treat the disease successfully much more than this is required. In each case the individual morbid tendencies, both inherited and acquired, must receive careful attention. For instance if the patient is gouty, rheumatic or tubercular, these conditions, which probably will modify the course of the disease, must be treated, as well as the disease itself. In other words, it is necessary to treat the patient as well as the disease. Treatment should be individual and not routine.

In the therapy of this disease the drug intrimine is referred to above. Intrimine is a sulphur product, a reducing agent which prevents arsenic and mercury from exercising a toxic influence on nerve tissue. This drug is given intramuscularly in doses of 2 to 5 cc. If the syphilitic case is gotten before the stage of generalization, every effort should be made to rapidly sterilize the patient. If, as McDonagh has shown, neosalvarsan is combined with one or two doses of intrimine, the maximum amount of the arsenical will be taken up, and the maximum amount of protection for the nervous system will be secured.

During the stage of generalization, the ideal method of treatment may be otherwise, as here we should administer the arsenical in such a manner that its absorption may be slow, steady and gradual. The medicament will then be able to find its way to the intrathecal system, and

it will not produce a sudden, general, complete systemic sterilization with consequent destruction of anti-body supply. Anti-body supply should be conserved over a long period of time. In stressing the importance of neoarsphenamine and mercury in the chemo-therapeutic attack on the *treponema pallidum* and the pathological formations caused by it, too frequently the physical condition of the patient and the toxic effects of the drugs upon him are forgotten. Proper hygienic treatment of the patient is necessary to stimulate his resistance and to assist the action of the drugs. The preliminary examination of the patient should include a study of all his organs and their functions, so that proper hygiene can be advised and tonics administered when needed.

In early cases the arsenical remedy, properly used, gives good hope of arresting the disease. In later stages the outlook is not so certain, but the treatment is almost always worth a trial.

In general the lesions of the central nervous system due to inflammation or exudation are much improved or eliminated by general treatment of patient. All methods of treatment fail in certain types of neurosyphilis because of the inability to reach the organisms in inaccessible localities, and because of secondary degenerations of tissue which cannot be restored. The treatment of neuro-recurrences which is almost unanimously advocated, is the prompt administration of arsphenamine or neoarsphenamine and mercury, and the happiest and most permanent results are obtained when the arsenical preparation is pushed to an extent far beyond what is usual in ordinary routine work. It is imperative to realize that neoarsphenamine, if given in sufficient amount, and over a proper period, can be the means of totally destroying the active agents, and of thus producing a cessation of the disease. On the other hand, an insufficient quantity may be the means of undermining the body resistance, so that the spirochetes present in the cerebro-spinal fluid may act as a greater irritant to the parts and tend to produce rather than retard neuro-recurrence.

Subsequent treatment depends upon the behavior of the Wassermann reaction, and no case should be considered as exempt from the necessity of further treatment until after it has been shown possible to obtain negative blood and spinal fluid reaction, and total absence of symptoms during consecutive periods of three, six and twelve months following the last treatment.

Although only about 20 percent of syphilites develop neurosyphilis, when this percentage is computed on the syphilized population of a country it makes the question not only individual but one of the greatest importance to the state. The nature of the disease itself, with its insidious development, its onset during the prime of life, the loss of power to earn a livelihood, and the eventuality of the patient becoming a charge

of the state until a miserable death from paresis or tabes ensues, makes an early diagnosis, and early and efficient treatment, of the utmost importance.

In tabes dorsalis the clinical results following the use of the arsenicals intravenously have not been eminently satisfactory, and workers have been giving attention to the intraspinal treatment of this disease.

Actuated by the fact that the spinal fluid, as the result of the intravenous treatment with the arsenicals, contains little or no arsenic, Swift and Ellis instituted the intraspinal injections of arsphenamized serum, which aroused great attention, and since the publications of their investigations numerous workers have applied their method and it has stimulated others into devising similar procedures, so that today intraspinal and intracranial treatments have taken a permanent place in the treatment of syphilis of the nervous system. Paresis seems most resistant to this type of treatment which, from the location of the organisms, is to be expected, although some very encouraging results have been obtained in early cases of this disease.

The treatment of paresis, like the treatment of smallpox, should be preventive. In order that this may be accomplished the potential paretic must be recognized by his spinal fluid findings. Long before clinical evidence is at hand, the colloid gold test will give warning. If this is heeded, and appropriate treatment instituted, paresis may be prevented.

The results obtained in tabes by the combined arsenical and mercurial treatment are greatly superior to those accomplished by the administration of the arsenicals alone. Direct medication of the spinal fluid may well be restricted to the hands of experts, as a most unfortunate accident occurred in the Los Angeles County Hospital in March, 1914, when eight deaths followed the intraspinal injection of neuarsphena-minized serum. In contrast, however, to the almost brilliant results obtained by most investigators, Sachs, of Mt. Sinai Hospital, in 1916, states that the intraspinal therapy possesses no advantage over the intravenous and that the former method is of occasional and secondary value only. Since the institution of modern methods of treatment, the prognosis of tabes has become more hopeful, and even in cases of long standing may yield in a remarkable manner. It must be said, however, that those cases which are early recognized and show the greatest activity of the syphilitic process, that is, those with positive laboratory findings, are the most amenable to treatment. Cases in which marked degenerations have taken place cannot, of course, be restored to normal; but the process can be stopped and at least the subjective symptoms, the lightning pains and crises may be relieved. This in itself constitutes a distinct victory, as probably no suffering in all the field of human

ills is more intense. When tabes has reached its final stage the treatment is no longer indicated, because it may aggravate the clinical picture.

All types of syphilis of the nervous system found in the acquired form may be seen in congenital syphilis, including syphilis of the nerves, arteritis, meningitis, cerebral and spinal gum-mata, as well as paresis and tabes, the treatment of which as outlined for the acquired form is largely indicated. The prognosis of involvement of the nervous system in congenital lues is more unfavorable than such involvement in the acquired form of the disease, and most cases lead to a fatal termination.

This disease is a common cause of nutritional disorders, arrested development, and malformations in the progeny. The best way to treat congenital syphilis is to treat the mother before the child is born.

In starting treatment in infants with florid syphilis, it has been found unwise to begin with full doses of the arsenicals. Theoretically, the ill effects are due to the sudden killing of large numbers of spirochetes, with resulting damage to the patient. Soluble mercury intramuscularly may be used the first few weeks, to be followed by the arsenicals in very small doses. A little later, larger doses may be given.

If syphilis is well treated in infancy, the number of syphilitic defectives will be so small as to be almost negligible. The family of every syphilitic patient should be examined, irrespective of the stage of the disease or the symptomatology presented by the patient when first seen. If this is done, cases of conjugal and congenital syphilis will be discovered which would otherwise be neglected. They will often be found at a period when symptoms are not active, and thus treatment may be instituted before irreparable destructive lesions have occurred. An opportunity is offered to prevent the development of such disabling conditions as general paresis, tabes dorsalis, aneurisms, and the like. The possibility of bearing healthy children may be thus increased. Syphilis in women is the worst of the evils caused by syphilis. Many mothers show no evidence of the disease until after the child-bearing period is over, and as often as not the Wassermann reaction during this period is negative.

Many physicians and dentists present extragenital chancres, and it must be borne in mind that the blood of all syphilitics is infectious, the congenital least so, the blood in primary and secondary stages being more capable of conveying the infection than that in the tertiary or latent stages.

In conclusion may we say that in the treatment of syphilis no single sign of improvement should be accepted as definite or final, and treatment should not be stopped at such indication.

Only cessation of all symptoms with the incidence of repeated negative blood and spinal fluid means a cure. However, a normal spinal fluid does not necessarily indicate a cure. In fact, neurosyphilis can exist in absence of spinal fluid finding even when untreated; but the spinal fluid should be interpreted with the symptoms and physical findings. Neoarsphenamine therapy is necessary since it controls infectivity and contagion. It yields quick results. Mercury is essential, but as a splint to our arsenic therapy, and as an aid to a permanent cure. Over-treatment is preferred to lack of treatment. One needs to review but a small proportion of the mass of present day literature on the treatment of syphilis to be convinced that mercury, not by the month, but by the year, and the arsenicals not by the dose, but by the half dozen of doses, must be given before any hope of a cure of syphilis can be held.

The advance made in the knowledge of syphilis during the last seventeen years finds no equal in the entire history of medicine.

Syphilis is no longer to be considered a genito-urinary disease, nor a dermatological disease, nor a disease belonging exclusively to any specialty; but it is to be thought of as a disease requiring knowledge in all fields of medicine. It is, however, the general practitioner or the genito-urinary specialist upon whom the burden of responsibility should rest, for one of these as a rule sees syphilis in the beginning, and if his work is well done, there should be no need for that of others in the majority of cases.

DISCUSSION

DR. CHARLES P. EMERSON (Indianapolis): The treatment of lues is such a huge subject that any discussion must apply to definitely limited points. Dr. Luzadder certainly sounds a timely warning in urging long-continued treatment and caution in prognosis.

May I relate an incident that occurred in 1908 or '09? I happened to be a guest in one of the hospitals where the first doses of salvarsan were administered. Quite a large group of doctors were present, all clothed in surgical gowns. The professor of medicine, who prepared the solution, and the professor of neurology, who assisted him, were clothed in white gowns, with surgical masks and gloves. They also had the permission of the patient's parents to give the injection. Everything ready, we marched down the corridor two by two to the patient's room. The professor held the syringe at arm's length in front of him and, looking at it, admiringly said: "Wonderful drug! One dose cures a case of syphilis." "Yes," said the neurologist, "wonderful drug! One dose kills every spirochete in the body." Three months later these same men had decided that it was wise to give a second dose; six months later all were giving three or four doses. After about two years, in

addition to salvarsan, it was again our custom to give mercury and potassium iodid, not only in larger doses than previously, but for a third year. And recently Dr. Warthin said that he had never yet performed an autopsy on a syphilitic patient, no matter how well treated, but that he had found some active luetic process. All of this only shows that the treatment of syphilis is difficult and everlasting.

Although the work was not on human beings nor on spirochete infection, yet the work of Keyes and others has helped us to understand this problem. They showed that if an infection continues long enough the phagocytic cells designed to protect the body against this germ will not only kill these germs, but will harbor them and protect them against the other protective mechanisms of the body. If we get the case early enough, one dose of salvarsan may cure the patient; and long-standing cases can be checked, but can they ever be cured?

I do think that we sometimes treat too intensively; we should keep our patients in good condition. The problem is not so much intensive as it is everlasting treatment.

One point in connection with gumma of the brain is worth considering. If we are sure that one is present, we feel that the surgeon should do a decompressing operation, not to remove the gumma, but to relieve the pressure which alone, if allowed to continue long enough, will certainly do much damage. Then when our medication shall have removed the tumor we will not have a well but blind, etc., patient.

DR. WILLIAM S. EHRICH (Evansville): I would like to paraphrase the saying of one of my predecessors—that fractures are treated with splints and brains. I should like to say that syphilis is treated with drugs and brains. I know of no routine treatment that will cure syphilis. Each case must be treated as a law unto itself, in the same way as you treat other diseases, or you will not get results. For that reason I think syphilis is one of the poorest handled diseases, because men say they are going to give so many doses of mercury and so many of salvarsan; let the patient take a rest, and then make a Wassermann test. Some patients can stand much more mercury and arsenic than others, some need one drug and not the other, and each one should be treated as a case unto itself.

Of the laboratory aids, the most important is the discovery of the spirocheta pallida by dark field examination by India ink or any other method.

In no disease is the early diagnosis so important as in syphilis, for in the early stages, before the infection has reached the lymph supplied tissue, I think salvarsan will cure, and that it will cure no other type of case. I think the salvarsan does not reach the organisms after

they get into the lymph supplied tissues, but if the diagnosis can be made in the very early stages, it is curative.

I disagree with the doctor in that I invariably use mercury with salvarsan and have never had any unfortunate results. Since the beginning of treatment with arsenic I have always given it in conjunction with mercury because I knew mercury would cure syphilis. I did not know that arsenic would cure syphilis. Mercury

makes the tissue an unfavorable culture medium for the growth of the spirochete. Salvarsan kills off all that it comes in contact with, consequently, if we kill those and have an unfavorable culture medium for the rest, it stands to reason that we have a better effect if we combine these two drugs. I have seen patients who have had twenty to thirty injections of salvarsan with a still positive reaction and after a few months a specific dermatosis.

PRESENT STATUS OF THE USE OF DRUGS IN HEART DISEASE

Paul D. White, Boston (*Journal A. M. A.*, Sept. 2, 1922), deals primarily with digitalis and quinidin. The use of digitalis, he asserts, is indicated in only two conditions: first, in heart failure of the congestive type, and second, in auricular fibrillation or auricular flutter with a rapid ventricular rate, whether or not failure is present. Digitalis is a toxic drug, and unless there is some clear indication for its use it should not be given. It is conceivable that it may sometimes do more harm than good. Its routine use in infectious disease, whether typhoid fever, influenza or pneumonia, and its routine use before or after operation are to be deplored. If auricular fibrillation or flutter or congestive failure should supervene in any of these conditions, it is possible, by large doses of digitalis administered by mouth or intravenously, quickly to combat the condition within a few hours at the most. Relatively rarely does such a need arise; therefore, there is no reason for afflicting everybody with a poisonous drug when only now and then it may be needed. Even in emergency, digitalis is often given when it is not indicated. The particularly remarkable reputation of digitalis is due mainly to its dramatic effect in auricular fibrillation. Digitalis acts not only as a stimulant in increasing the degree of systolic contraction in auricular fibrillation as well as in normal rhythm, but also by its sedative action on the heart, it improves the circulation far more effectively in auricular fibrillation than in normal rhythm. In auricular fibrillation, the conduction system is particularly susceptible to the effect of digitalis, and it is in this condition that a rapid reduction of ventricular rate of 20, 40, 60 or even 80 or 100 beats a minute may bring such relief to the heart. The saving of 100 beats a minute for the heart (most of them ineffective anyway in supporting the circulation) means the saving of more than 100,000 contractions a day. This means an astonishing rest for the myocardium in the course of hours and days. Given a leaf of proper potency as determined physiologically, it matters little or not at all whether it is administered in pill form as powdered leaf, by tincture or infusion, though the last, if made according to the U. S. Pharmacopeia directions, will be too weak. Usually not

enough digitalis is taken. If there is urgent need for its use, it should be given in sufficient dosage to saturate the system in forty-eight hours or less. Eggleston has suggested 0.15 gm. of the leaf or (1½ cat units) for every 10 pounds in weight. One-half of this amount may be given at once and another quarter after six hours, an eighth more in six hours, and so on until saturation is evidenced by toxic symptoms, by marked reduction in ventricular rate or by the production of a coupled pulse. White has found that the amount figured out for a satisfactory saturation may be sometimes 0.1 grain of the standardized leaf rather than 0.15 gm., which in some cases may result in disagreeable toxic symptoms. Also this dosage may be spread through two days more evenly, that is, by giving one-sixth of the dose three times a day for two days. Quinidin sulphate is indicated particularly in the treatment of auricular fibrillation of recent origin, preferably of less than six months' duration, when heart failure has not been, or is not, an important feature, and in the prevention of paroxysmal auricular fibrillation. Chronic heart disease, especially with chronic mitral stenosis and auricular fibrillation more than a year old, is, in general, a contraindication. Heart failure also seems to be a contraindication to the use of quinidin. In twenty-seven cases of auricular fibrillation of less than six months' duration, twenty-two hearts, or 81 percent, were restored to normal rhythm, and fifteen, or 56 percent, maintained normal rhythm. In twenty-three cases of auricular fibrillation of more than two years' duration, eleven hearts, or 48 percent, were restored to normal, but only three, or 13 percent, maintained normal rhythm. In forty-eight cases of congestive failure, thirty-two hearts, or 67 percent, were restored to normal, but only eleven, or 23 percent, maintained normal rhythm, while in twenty-seven cases in which failure did not occur, nineteen hearts, or 70 percent, regained normal rhythm, and fifteen, or 56 percent, retained it. Seven of a group of nine patients with paroxysmal auricular fibrillation (and flutter) have been much benefited because of the marked reduction or abolition of the attacks by quinidin. In other cardiac disturbances, such as premature beats, heart block and paroxysmal

**THE JOURNAL
OF THE
INDIANA STATE MEDICAL ASSOCIATION**

Devoted to the Interests of the Medical Profession of Indiana

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NOVEMBER 15, 1922

EDITORIALS

MISPLACED MEDICAL CHARITY

As an evidence of how medical men are imposed upon through the operation of various uplift schemes, mostly sponsored by ambitious women who have neither home nor family ties, we cite the following instances:

A Young Women's Christian Association organized a gymnasium class "for business women", and the originators seemed quite perturbed because a regular physician refused to give gratuitous services in making complete physical examinations for those who desired to enter the gymnasium classes. It should be understood that these business women are all in comfortable circumstances and earn good salaries. Presumably they pay a tuition fee for the gymnasium classes, and there is no earthly reason why a sufficient sum should not be added to the tuition in order to provide a respectable fee for thorough physical examination at the hands of a reputable physician.

In another instance a woman uplifter whose husband regularly employs a man for skilled work actually made arrangements with a surgeon to do a gratuitous operation upon members of the employee's family on the ground that the employee was poor and unable to pay a fee. Without presuming to criticize the female uplifter because her husband failed to pay his employee a suitable wage, yet the fact remains that the employee resented the implied charge that he was deserving of charity and insisted upon paying a modest fee for surgical services rendered.

These are but examples of almost daily occurrences in the lives of busy physicians, and indicate the extent to which charity of one kind or another is unnecessarily bestowed, with the result of pauperizing that large element in society that is perfectly willing to be pauperized or be relieved of any responsibility. Many women who live in hotels or boarding houses and have no responsibilities other than the care of a poodle dog and an occasional soft word for a hard working husband because of the pecuniary recompense that it may bring forth, seem to think

that it is a duty they owe to society, even though self-advertisement is the motive, to engage in uplift work of one kind or another. These women are not satisfied to take up with the established social agencies, largely because they can't be "the big toad in the puddle", so they start uplift schemes of their own, with the avowed intention of getting such glory as they can out of the enterprise. It does not make any difference whether there is a crying need for these uplift efforts or not, as long as the activities furnish a medium for self-advertisement and can be labeled "a very worthy object".

The public-spirited citizen is bled for all these uplift schemes, but in view of the fact that so many of these same schemes require the active services of members of the medical profession, whether by way of making physical examinations of one kind or another or in furnishing gratuitous medical or surgical attention, it is apparent that in the final analysis it means a rank imposition upon charitably disposed doctors, and, worse than all that, it means the pauperizing of the community through the bestowal of misplaced and unneeded charity. We confess that it is a little difficult for the doctor to turn down his patient, Mrs. Fatty Limousine, the wife of the banker, when she asks that a gratuitous operation be performed upon the member of the family of a plumber or a coal miner who is pulling down more actual money in a month than the doctor makes in six months, but some means should be adopted whereby this growing imposition can be stopped. It is an imposition not alone upon medical men and others who contribute of services or means, but it is an imposition upon the public because we are creating a dependent class of individuals who shirk responsibility and who grow in the belief that the world owes them a living without turning a hand toward their own economic improvement.

The plan adopted by some medical societies of making it necessary to refer every call for gratuitous medical services for an unbiased and unprejudiced investigation is perhaps one of the best ways to solve the problem. Another way is to insist upon having the recognized charitable organizations of the community give a report upon the propriety of giving gratuitous services. Finally, medical men or medical societies should say to the uplifters, "The services will be rendered for a fee consistent with the ability of the patient to pay, no matter how little the fee may be", and to show that the medical profession is not sordid in making this proposition the offer should be made to turn the fees over to the uplift society if the cases referred really belong within the scope of uplift work.

THE NURSING PROBLEM

The nurses again are agitating the subject of increased compensation and a lessening of hours and duties. Practically all of them now charge and receive from thirty-five to fifty dollars per week together with their keeping, and most of them not only are trying to limit the time on duty to eight hours but insist that relay nurses be employed when cases require constant attention. Aside from this many of the nurses refuse to take anything but the easiest cases or those which may be called "snaps", such as clean surgical cases requiring little or no dressings. Then a certain percentage of the nurses refuse to take cases in private residences and insist upon having nothing but hospital cases. Furthermore, even the nurses in training are getting to the point where they give nothing but the most superficial care to cases, so that in reality a patient in a hospital, even though he ought to get along exceedingly well with nothing but the care of the floor nurses, is compelled to have a special nurse if anything more than the most ordinary attention is required. An analysis of the situation shows that no one but a person with means can afford to have a nurse, and in many hospitals all patients suffer as a result of the superficial attention given.

We have no fault to find with the highly trained nurse who demands and receives high wages for her services from those able to pay, and who is able to limit the hours of work, but we do say that there is a crying need for thousands of real nurses who will take care of the average sick, and especially the people in poor or even moderate circumstances who need ordinary nursing care and of necessity can pay only modest compensation for the same. We confess to having been in sympathy with the various efforts to raise the standard of nursing, but we find that in raising the standard of nursing we also have made it possible for the creation of an arrogant, overbearing and wholly unsympathetic class of women who for the most part are looking not at the humanitarian side of their work but for the greatest remuneration obtainable at the least expense of effort. As a matter of fact people in moderate circumstances no longer can afford to have a nurse. They are able to secure the very best medical and surgical services at fees that are in keeping with the ability of the patient to pay, but when it comes to having a nurse the story is quite different. It is for this class which make up the bulk of those who are sick that we need thousands of good practical nurses, not the highly trained, cold blooded registered nurses with their exaggerated ideas of their attainments, importance and value of their services, but the nurse who

can give ordinary nursing care, and who possesses enough of the milk of human kindness to make her sympathetic and helpful in caring for the sick.

DUES AND THEIR USES

A member of the House of Delegates at the Muncie Session suggested that the dues of the Indiana State Medical Association should be reduced, which suggestion very properly met with no favorable action.

In this connection it may be well to consider seriously what the dues are for. Naturally the first thing for which dues are necessary is the running expenses of the Association. This includes the honorarium to the Secretary, the actual expenses of the councilors, the expense of annual sessions, and that part of the cost of publishing *THE JOURNAL* which is not covered by the advertising income. These expenses are well taken care of by the present dues. However, there are other expenses incurred in carrying on enterprises that are of direct or indirect benefit to the Association and the individual members thereof which deserve the sanction and support of every member.

A few years ago we established a medico-legal defense fund, and at present that fund has in its treasury the limit fixed by the Association as the amount beyond which no further accumulation would be permitted. Both last year and this year the medico-legal defense assessment was turned back into the general treasury. Then we have the expense of various committees, and that includes the expense of the very valuable and efficient work done by the Committee on Public Policy and Legislation. As a matter of fact that committee should have been given ten times the amount expended, provided the work which the committee should do is carried out effectually.

At the Muncie session we provided for an educational committee, with the former Secretary of the State Board of Health, Dr. John N. Hurty, at its head. This educational committee will do a work that should have been done years ago, namely, acquaint the public with the aims and objects of the regular medical profession, the necessity for maintaining high standards for medical education and licensure, and point out the inconsistencies and absurdities of some of the teachings of the pseudo-medical cults, charlatans and quacks which have been growing as a direct result of propaganda that no one has attempted to controvert. It is recognized that we owe something to the public as well as to ourselves, and this being the case we should help to protect the public from the dangers of unscientific medicine and quackery. On the other hand, we owe it to ourselves to protect our position as educated and qualified

physicians, and to prevent, if possible, either legislation or public opinion which in any way discredits the knowledge and experience acquired through long and intelligent effort and great expense.

Every member of the Indiana State Medical Association should contribute his share to these various undertakings, and he ought not offer any objections to annual dues of even ten times what is paid at the present time, as long as he knows that the money is to be expended judiciously and well. Incidentally it may be noted that the very things we are trying to combat are brought about by the active work and the propaganda of the pseudo-medical cults, which cults have spent one hundred dollars to our one in spreading information that is based upon neither facts nor reason. Much of this propaganda has been in direct opposition to the medical profession and to the high ethical, scientific and educational standards that we maintain. As a direct result of this widespread effort on the part of these pseudo-medical cults we stand to lose our prestige and standing, and the public, the one most concerned, to innocently suffer from the effects of ignorance and quackery. Had we turned our hand to the work of defending our position and discrediting the teachings of the pseudo-medical cults we would not now be floundering in the sea of uncertainty as to what the final outcome will be, and it would not be necessary to put forth such Herculean efforts as now will be necessary in order to put the public in possession of the facts. Therefore, our educational committee, with Dr. Hurty at its head, should and will do a work of inestimable value, but to do this will cost money, and the money must come from the regular medical profession. The reserve now on hand in the Indiana State Medical Association treasury should be employed to further the purposes outlined, and every member of the Association should be willing not only to pay the dues that are assessed at present but double or triple the amount if deemed necessary in order to carry on the contemplated work to the fullest extent.

FEES PAID BY INSURANCE COMPANIES FOR MEDICAL EXAMINATIONS

The Postal Life Insurance Company boasts of low expenses in doing business and feels rather proud of the fact that it is able to cut out the expense of agents. It might with equal propriety boast that it gets its medical services at a low rate, but in doing so it would be claiming nothing more than can be claimed by all the other life insurance companies, for not one of them pays a fee for medical services that is at all in keeping with the value of the services rendered. As a matter of fact, the key to the success of a life insurance company, so far as concerns the acceptance of

risks and keeping losses at a minimum, depends entirely upon medical examinations. Careful examinations by competent medical men mean the elimination of many risks and losses, and the examiner, if he does conscientious and skillful work, is deserving of adequate compensation. The Postal Life Insurance Company, following the lead of some other insurance companies, has established a "health bureau", and policyholders are asked to take advantage of it by appearing before medical examiners for a physical examination to determine the condition of the health and the possibility of the existence of any abnormal or diseased condition requiring the attention of a physician in order to prolong life and health. The policyholders are requested to report to a physician for what the company says is a "brief physical examination". However, the Postal Life Insurance Company, with the astuteness that is born of long experience in the insurance field, asks the examiner to make a report, which, if filled out intelligently and conscientiously, would require an exhaustive physical examination which if done properly would require at least an hour or more of the examiner's time, to say nothing of the time required to fill in the blank, which covers questions concerning practically every function possessed by the policyholder. For this "brief physical examination" the company tenders the examiner the munificent sum of two dollars. Presumably as a bait to make the examiner think that he isn't doing so much, he is not required to make a urinalysis but is expected to send the sample of urine to the company at the home office in New York. If all the questions concerning the policyholder's physical condition are answered intelligently, as based upon a careful examination, the fee for the services is ridiculously low. On the other hand, if the questions are answered without a careful examination having been made, then the examiner is guilty of dishonesty. In either event someone is bound to get the worst of the deal, and the company is shrewd enough to consider the average doctor honest enough to make a thorough examination no matter what remuneration is received.

The whole thing shows to what extent imposition is practiced upon members of the medical profession by life insurance companies. The principle of trade unionism is absolutely correct insofar as it protects the honest worker and works no injustice to the employer. The principle of trade unionism should be adopted by the medical profession in its dealings with insurance companies of every description, and, in fact, in the rendering of medical and surgical services to any but those deserving of charity. It is the height of folly to argue that doctors must continue to be the only followers of any vocation of whatsoever kind that are not protected in the question of remuneration for services rendered. We are imposed upon by insurance companies because we tolerate it without

a whimper and because we apparently like it. The insurance companies, always on the lookout for saving money except when it comes to the payment of salaries of their officers, take advantage of spineless doctors because it can be done. If the American Medical Association, backed by its 89,000 members, would say to the insurance companies that a ten or twenty dollar fee is a fair and just fee for such an examination as required by old line life insurance companies, and that no member of the Association would make an examination for any less remuneration, the life insurance companies would pay the demanded fee without a word of protest and the cost of life insurance would not be increased a penny. In fact it is a question if a better grade of service could not be secured by the companies through discrimination in the appointment of examiners, and with better examinations there would be an improvement in the risks accepted, a diminution in losses, and a corresponding lessening in the cost of insurance. The question is, how long will the medical profession continue to be unorganized when it comes to looking out for the purely economic welfare of its members?

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 635 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

PAY your State Association dues and pay them now! Don't wait to be urged by the Secretary and don't procrastinate until you are notified that you are delinquent.

DR. G. W. H. KEMPER, an ex-president and for many years the historian of the Indiana State Medical Association, attended the Muncie session of the Association. He now resides in California and it is very evident that the salubrious climate of his new home agrees with him, as he seems to be young physically and mentally in spite of his advanced age. He was warmly welcomed by his old friends and it is hoped that he will be able to attend many future sessions of the Association.

THE quacks and charlatans usually are found on the front seats of our churches. They put their silver in the contribution box with a loud clatter so as to attract attention, and they pray the loudest at the Wednesday night prayer meeting. Strange, but true, these chaps usually have the ear of the pastor, who does not hesitate to recommend them to the gullible portion of his congregation. Is it any wonder that reputable and competent doctors are somewhat nauseated and are not very keen about their affiliation with the church?

THE Indiana State Medical Association should consider itself fortunate in securing the services of Dr. Hurty as chairman of its educational committee and a field worker in the interest of higher ideals and practices in the medical profession. Had he not been financially independent and willing to engage in a work for the love of it and because it represents a principle he desires to uphold, he would not accept the position for compensation that is a half to two-thirds less than he has been offered by numerous industrial concerns that have sought his services.

THE Federal prohibition agents are beginning wholesale prosecutions of doctors who misuse prescriptions for alcoholic beverages. This probably is of little interest to Indiana doctors who are not permitted to write prescriptions for alcoholic beverages, but it indicates the determination on the part of the government to enforce the Volstead Act to the letter. As before stated in the columns of THE JOURNAL, we are not in sympathy with the sentiment which put over the Volstead Act, but we do believe that doctors should be in better business than acting as bootleggers or assistants in procuring liquor by illicit means.

IT is the generally accepted opinion of lay persons that the bite of the tarantula is fatal or at least very serious. Just why this opinion prevails is hard to understand, inasmuch as no trustworthy records concerning the toxicity of the tarantula bite are obtainable. Recently W. J. Burg, of the University of Arkansas, has subjected both animals and men to attack by the fangs of active tarantulas and he reports that the results are put in the category of bee stings in severity and no more menacing or dangerous than the ordinary bee sting. This would seem to prove that the danger from the bite of the tarantula has been very greatly exaggerated.

THE chiropractors believe in advertising, and they are finding some lay periodicals of national circulation that will accept their advertising. Thus *Life*, always violently opposed to rational scientific medicine and a sponsor for all of the "antis" including the anti-vivisectionists and the

anti-vaccinationists, is quite willing to boost chiropractic with all of its fallacies and inconsistencies. However, practically all of the best weekly and monthly lay periodicals refuse to accept medical advertising of any description, well knowing that when such advertising is offered to them it usually comes from quacks and charlatans rather than from reputable medical men. With *Life* it is different.

SOME doctors have gone "nutty" over the subject of vitamines and, profiting by the public interest created by medical agitation of the subject, unscrupulous manufacturers are capitalizing the vitamine demand by putting out commercial vitamines, advertised as possessing unusual therapeutic properties. The advertising matter follows closely the trend of patent medicine advertising in which a large number of diseased conditions are referred to as being cured by vitamines. The public should be informed that concentrated vitamines are unobtainable, and the commercial product should not be substituted for fresh vegetable foods which are in general very rich in vitamines.

THOSE doctors who are interested in spreading the gospel of truth concerning medical fads and fallacies should get in touch with the Propaganda Department of the American Medical Association. Two volumes on "Nostrums and Quackery" published by the A. M. A. comprise a veritable encyclopedia on the subject. In addition to this the Association publishes a large number of pamphlets dealing with various phases of the patent medicine evil and quackery. In brief, the Propaganda Department of the A. M. A. is a clearing house for information on the nostrum evil, quackery and allied subjects. It not only deserves the support of the medical profession but the department should be utilized to the fullest extent in educating the public.

THE sensational trial at South Bend, in which a married woman attempted to prove parentage of her child, brought forth considerable newspaper comment concerning the possibility of determining parentage by blood tests. A San Francisco physician (Abrams) who has been more or less in the limelight and is considered by some as a faker, was offered as about the only one in this country who could determine with certainty the parentage of a child by tests that he is supposed to have either originated or improved upon. In commenting upon this subject the *Journal of the A. M. A.*, October 7, 1922, after discussing the precipitin test, which is used generally to determine the nature of blood stains for medico-legal purposes, and other methods of recognizing variations in human blood, concludes as follows: "The conclusion is that at present science knows of no blood test by which parentage can be determined."

THE *Boston Medical and Surgical Journal* calls for some constructive action from the American Medical Association. Our law makers really desire information relating to benefits and dangers of measures presented as well as political effects of their decisions. They are entitled to respect insofar as they are honest servants of the people, but they should not be left without all pertinent information. The American Medical Association could present the highest type of information in all matters relating to public health and the maintenance of efficient public health service, and to this end should establish a committee composed of representatives from all of the states. This body should be paid a reasonable compensation for time given and should study proposed legislation, decide upon a course of action, and with the dignity and power of the Association behind it, tell Congress what should or should not be done.

As diphtheria seems to be more prevalent during the winter months it may not be amiss to call attention again to the results of active immunization with diphtheria toxin-antitoxin. Three doses of toxin-antitoxin, each from 1 to 1.5 c.c. injected a week apart, should be administered. A longer interval between the injections, probably two weeks, may be found to be of advantage in producing a better immunity. At least six months should be allowed to elapse between the injections of toxin-antitoxin and the Schick retest to determine the development of an active immunization. A second series of two or three injections of toxin-antitoxin should be given to those who have not become immune after the first series. There are a few people who are difficult to immunize with toxin-antitoxin, even when they are given several series of injections. There is practically no danger from anaphylaxis, either in repeating the injections of toxin-antitoxin or in giving toxin-antitoxin as a preliminary to injection of antitoxin.

IN the scheme of organization of the chiropractors is a plan for providing medico-legal defense, and in Fort Wayne a company has been formed for defending chiropractors in malpractice suits. It will be interesting to know just how they will succeed in protecting chiropractors when the courts are called upon to decide upon the fitness of chiropractors to practice upon the sick and suffering. At present they are law breakers, which in itself puts them beyond the pale of protection by law for their acts, and it will be interesting to note whether the courts will sustain them in their radical and inconsistent claims concerning the cause and treatment of many diseases the nature of which has been known and recognized by scientists for many years. As a matter of fact we would like to see a few malpractice suits

for the purpose of showing up the inconsistency and ignorance of these pretenders. It is only when the public really becomes interested in suppressing imposition that chiropractic will be suppressed.

At a recent meeting of the Kosciusko County Medical Society a resolution was passed recommending that House Bill No. 267, introduced at the last session of the legislature, be reintroduced in the coming session of the legislature and that an amendment be added to the bill to read as follows: "For the purpose of enforcing the provisions of this Act it is hereby made the duty of the Judges of the several Circuit and Superior Courts in this State, and they are hereby expressly granted power so to do, on proper showing made that any person in said State is practicing medicine without a license as defined herein, to grant temporary and permanent injunctions restraining and enjoining such persons from continuing so to practice medicine in this State until such person or persons have complied with the provisions herein provided."

The object of this amendment is to enjoin anyone from practicing medicine until he has complied with all laws pertaining to licensure.

No matter what caused his defeat, let us be thankful that Nathaniel C. Ross, president of the Ross Chiropractic College of Fort Wayne, and aspirant for a second term in the Indiana legislature, failed to secure re-election. In the last session of the Indiana legislature he was the author and principal defender of the chiropractic bill which failed of passage, and it is a well-known fact that the only reason why he desired to become a member of the legislature was for the one purpose of obtaining legislation favorable to the chiropractors. In reality we are a little surprised that he was defeated, for no candidate ever had as many satellites working for him night and day. The chiropractors, the chiropractic students and their intimate friends, probably numbering several hundred, worked long and ardently for their leader, and there is no doubt that such politics usually brings about victory if there is little opposition on the other side, and in reality the regular medical profession scarcely turned a hand to defeat Ross. Anyway, we may feel that the wings of Ross have been clipped, and while he probably will camp at the next Indiana legislature "with bells on", yet he will not have the same influence as he would have had he succeeded in being elected.

ACCORDING to newspaper reports, Professor Lorenz is back in this country again and this time to remain permanently. As a matter of fact he has found America to be a very hospitable place. The lay press has heralded him as the world's greatest orthopedic surgeon, and in

order to place himself upon a firm basis with the American people and to secure the most flattering advertisement through the public press, he started what was supposed to be some charity work for the crippled children of America on the plea that he wanted to pay the debt that Austria owed to the American people. While doing this charity work he profited by the advertising and managed to see a sufficient number of private cases to insure him a very handsome income. With his introduction to the public through the lay press and the acquisition of a lucrative practice in consequence, he finally concludes to locate in America. We haven't the slightest objection to Professor Lorenz' decision to come to this country to make his home and practice his profession, but we feel that he is coming under false colors just as he started his charity work under false colors. The medical profession of the country has been criticized severely because it did not welcome Professor Lorenz and sanction his conduct in coming here a few months ago to do surgical work, but events prove that it is wise to withhold approval when motives and actions are open to suspicion.

In all probability many harmful effects caused by the indiscriminate use of laxatives and purgatives through self medication on the part of the laity escapes the attention of medical men. The *Journal of the A. M. A.* has called attention to phenothalein dermatitis, and the distinct concentration of the blood caused by Epsom, Rochelle, and Glauber's salts, whereas no such effects attend the laxative use of castor oil or cascara sagrada as representatives of vegetable purgatives. It is quite conceivable that undue concentration of the blood from any cause may lead to distressing symptoms and, accordingly, care should be exercised in the administration of purgatives in diseased conditions, especially in those states known to be responsible for concentrated blood. Pharmacologists have pointed out that salines in dilute solutions are more serviceable than salines in concentrated solutions as ordinarily used. The advantages which natural mineral waters have over the solutions of purgative solutions as usually employed is that they are very dilute and the patient is thus required to consume a fairly large amount of water with them. However, this advantage may be secured by proper dilution of purgative solutions, with the attending saving of expense over that required for the use of the natural mineral waters. Aside from this the drinking of a large quantity of water in connection with the salines very largely offsets the tendency to concentration of the blood that otherwise occurs.

IT seems to be perfectly natural for the world to attempt to fasten crime upon a suspect, even though the suspect may be perfectly innocent. Who of us if suspected of crime, even though

perfectly innocent, could stand the grilling repeatedly and for hours at a time by policemen, detectives, and newspaper reporters who analyze every action, facial expression and answer, not with a view to gaining the truth but to obtain some evidence that will enable them to fasten the crime upon a suspect. Few human beings are able to go through such an ordeal and not become confused and under the nervous strain contradict themselves in minor points, all of which is seized upon by the merciless inquisitors as spelling guilt. Perhaps this sort of thing has been the means of unearthing the perpetrators of crime in some instances, but often it places a perfectly innocent person before the bars of justice. To our notion there ought to be some provision in law to protect anyone, guilty or innocent, from the needless and brutal inquisition that all too frequently occurs in connection with criminal cases. For the protection of society, all reasonable and consistent methods of detecting crime should be adopted, but this idea of permitting the hit-and-miss inquisitorial work on the part of pseudo-detectives, newspaper reporters and even policemen, is all wrong and all too frequently becomes a grave injustice to perfectly innocent people. The numerous episodes in connection with efforts to discover the murderer of the New Jersey minister and his choir leader is a case in point.

EVENTUALLY the public will get wise to the inconsistency of permitting the quacks and incompetents to prey upon the sick and suffering without let or hindrance. The chiropractors have been gloating over the fact that in most states they have been unmolested, and in a few states attempts have been made to have the sect recognized legally. In New York State a bill which would recognize the chiropractors as competent to treat the sick and suffering was presented, and when it was before the governor for signature the *New York Tribune*, recognized as expressing sound and conservative views, had the following to say: "The public has not followed the details of the debate over the chiropractic bill now before the Governor for signature. Nor is it necessary to do so. To arrive at a judgment it is enough to know that on one side are the advocates of quackery and on the other those who would suppress quackery. The issue is the simple one of whether fraud is to be encouraged or discouraged. The quack, though he often changes his masquerade, is a member of an ancient profession. Knowing human aversion to pain and human gullibility, he exploits his fellow creatures by selling a cure-all. When men believed in evil spirits he marketed incantations; when medicaments came into use his herbs were sure cures, and in these later days he specialized on psychology, or laying on of hands, or blue glass, or cold water, or bone manipulation. Though

his prescriptions are altered to meet new conditions, he always has a panacea to dangle before the credulous."

THAT old warhorse, Dr. John N. Hurty, for more than a quarter of a century the able and aggressive secretary of the Indiana State Board of Health, has been elected a member of the Indiana legislature. The good people of Indiana, including the medical profession in particular, can be thankful that such a clear-headed and forceful character will represent them in shaping legislation that will either make or mar conditions pertaining to public health, sanitation, medical education, and medical licensure, to say nothing of being on the right side of every question that has to do with the welfare of the good people of Indiana. Incidentally it may be remarked that previous to the election, Dr. Hurty, over his own signature, stated that if elected to the legislature he would stand steadfast and true for all medical measures approved by the legislative committee of the Indiana State Medical Association, and stand strong against any measures which the Association is against. In passing, it may be stated that the report gained credence that Dr. Hurty, in deference to some of the women's clubs, had become an avowed advocate of the Shepherd-Towner Act. As a matter of fact he, like practically all members of the Indiana State Medical Association, is opposed to the Shepherd-Towner Act and all other acts of like character. He also is opposed to the act which appropriated large sums of money to the states for the purpose of fighting venereal disease. Both violate the same principle. In reality, Dr. Hurty will stand for those things which will make better citizens, and Indiana a better place in which to live. In doing this he will not be influenced by any maudlin sympathy, or by any desire to profit through preferment.

SOME doctors think that a government position is a "snap". In a sense it is, for most government officers loaf on the job and do not render enough actual service to entitle them to even the pay that they receive. In due course of time a government employee gets so used to putting in short and easy hours, and calling it a day, that he can't work like others who are occupying jobs that require service and perhaps competition. Now comes an act of Congress which makes it necessary for the retirement or discharge of a number of professional men, among which are many medical men. The officers to be retired or discharged have served the government for a long period of years, some of them twenty years or more. This means that a government position is not a "snap" and may be lost at any time, but it also means that those men who have been in the service for many years are very apt to be out of a job for a long time to come, as they are fitted for nothing

but the service in which they have been engaged. They probably will be utter failures in private practice, and we doubt if there are any commercial or industrial enterprises that will be willing to give them employment or could give them employment on the basis upon which they worked for the government. Now and then a man who naturally is energetic and ambitious may succeed either in working up a place for himself or in filling a place that is offered him, but in the main these government employees are going to find it tough sledding to get along, and all because our government, with its recognized tolerance of slothfulness and oftentimes incompetency, has permitted these men through years of service to acquire habits that are not in keeping with the highest efficiency demanded in civil life.

WE hear much about the impropriety of attempts to organize the medical profession to protect its economic standing, but it is about time for medical men to wake up and realize the importance of organization if they desire to save themselves from ruin. It sounds very nice to talk about humanitarian motives being the only guide in the practice of medicine but it should be remembered that doctors require roofs over their heads, clothing to cover their nakedness, and food to fill their empty stomachs, and nothing will bring forth these purely physical wants but the return of "filthy lucre" for services rendered. In Europe the medical profession has been reduced almost to pauperism, and all through lack of organization. If the doctors used half the business sense that is employed by the plumbers, printers, carpenters, brick masons or those following almost any other vocation in life, there would be no such thing as doctors making calls for ten and twenty cents each, as they do in England, and subject to penalty if anything more is charged. Is it any wonder that some of these doctors are taking up trades in order to earn even a comfortable livelihood? As a matter of fact medical men are the most gullible on earth, to say nothing of being the most apathetic concerning things that concern their own welfare. Self-preservation may be the first law of nature but it seemingly is not considered by the medical man, and sooner than he expects the average doctor will find himself virtually out of a job as a direct result of permitting the world to walk over him without protest. The only way to stem the tide of destruction is to organize the medical profession, and stick together in demands for those things which pertain to the economic independence of medical men.

IN the final passage of the tariff bill, the Senate reversed its position on the importation of dyes and synthetic medicines, and placed extremely high duties on all such articles. This

action of the Senate is in accord with the position taken in THE JOURNAL in its editorial announcement of August 12, in behalf of American-made synthetic chemicals for medical purposes. There was read to the Senate a letter from Secretary of War John W. Weeks urging that the American dye industry and synthetic medicine industry be protected in the interest of national defense and public health. While the Senate did not vote that there should be an embargo on these products, the tariff duties are of such nature that they will in effect be a conservative check on the importation of dyes and synthetic medicines derived therefrom. The new duties are based on American instead of foreign valuation. They fix the duty on coal-tar dye intermediates at 10.5 cents a pound and an additional 75 percent ad valorem, and on finished dyes and coal-tar products 90 percent, ad valorem. In urging the adoption by the Senate of these rates, Senator Wadsworth of New York showed that England, France and Italy have placed an embargo against the importation of dyestuffs. He said that as a people we have paid little attention and given small encouragement to scientific research. He asserted that chemical laboratories cannot be maintained unless there is a chemical industry, and that research in the laboratory and chemical industry go hand in hand. As a result of the favorable action taken by the Senate on this legislation, it is said that approximately 200 laboratories and plants manufacturing medicinals and coal-tar products which have been built up in this country since the war will be enabled to continue operations which otherwise must have gone out of existence.—*Journal of A. M. A.*, Aug. 26, 1922.

WE are hearing a great deal about the theories and practices of Dr. Albert Abrams, of San Francisco, and some doctors have been so impressed with the so-called marvels of Abrams that they are accepting his theories and using his treatment. Incidentally the Abrams theories and treatment seem to be a fertile subject for professional advertising. Occasionally we run across a patient who is singing the praise of Abrams and quoting from the writings of that gentleman. In commenting upon the matter the *Journal of the A. M. A.* says, "In any event it is all very interesting hot weather reading when one does not want to think."

A few weeks ago the *Boston Medical and Surgical Journal* pointed out the fallacies of Abrams' claims and the absurdities of his cult, and later Abrams, who came on to Boston to prove his theories and was given every opportunity desired or asked in order to establish his reputation as a miracle man, seems to have succeeded in showing himself up as a monumental faker. In fact, the *Boston Medical and Surgical Journal* declared that Abrams' visit to

Boston disclosed two outstanding facts: First, the man persistently refused to submit his methods to tests that could be scientifically controlled or to give a demonstration under conditions that would be subject to the usual rules of scientific criticism; second, in the one case in which he did demonstrate his methods, he found syphilis, tuberculosis, sarcoma and streptococcus infection in a healthy individual. It was pointed out that if Abrams can diagnose disease where no symptoms exist he certainly should have been willing to submit to a test based on the diagnosis of blood specimens from patients with definite ailments. The fact that Abrams refused to perform such tests speaks more eloquently than any critic. Abrams, it is said, claims that his electronic reactions are either the greatest miracle of the age or the greatest fake. Here we have a point of agreement with Abrams—and the electronic reactions are no miracle.

Two or three years ago the House of Delegates of the Indiana State Medical Association passed a resolution, the essence of which was a request that the Indiana University School of Medicine thoroughly investigate the subject of physiotherapy and report its findings to the Association. As we remember it there was a clause in the resolution which asked the medical school to establish a chair of physiotherapy as a part of the medical teaching of the school, if, after thorough investigation, it was deemed of sufficient importance to justify such a move. We have heard nothing further concerning the matter and we believe that the request made was worthy of serious consideration.

Unquestionably there is a field for physiotherapy, and it is because there is a field which we so long have ignored that the osteopaths, the chiropractors, and others engaged in purely mechanotherapy, have been able to accomplish some results and to thrive in consequence. Of course we recognize the fact that these pseudo-medical cults are irrational and inconsistent in their claims that *all* diseases of whatever form are due to maladjustments, misplacements, or pressure of some kind, and that the cure of *any* disease may be accomplished by manipulation, but the fact remains that there are a limited number of cases that are benefited by physiotherapy. Therefore it is not compatible with even good sense to totally ignore a form of treatment which even though applicable to a limited number of abnormal or diseased conditions should form a part of our equipment for practice. In fact our patients should know that we *do* recognize the value of physiotherapy in selected cases, and that we *do* apply that treatment with an intelligence that is not used by either the osteopaths or the chiropractors. Therefore, it is entirely proper that our medical school should teach the subject, not from the

standpoint of the ignorant enthusiast but from the standpoint of rational therapeutics, the instruction to cover its rational use and *point out its limitations*.

PROBABLY every doctor in Indiana who does any industrial work has had the experience of having his bill objected to by some liability insurance company. It doesn't make any difference how reasonable a bill may be, it is the habit of some insurance companies to offer objection. In fact objection seems to be a habit with them, without reference to reason. We doubt if any doctor presents a bill that is out of reason, and certainly it is getting to be rather rare for a doctor to attempt to charge excessively for services rendered in industrial cases. There are, however, any number of the better class of men in Indiana who are refusing to do industrial work because they will not wrangle with liability insurance companies over fees; nor will they put themselves to the inconvenience and expense of carrying a claim before the Compensation Board even though there is a reasonable possibility of having the claims allowed.

To our notion this whole subject of professional services in industrial cases is one for a committee on civic relations of our Indiana State Medical Association, but anyway the doctors of the State ought to unite on a policy of action which will bring about some justice, and which will prevent the liability companies from practicing the rank impositions upon medical men that are practiced at the present time. Just as long as the medical men stand for the brow-beating of insurance companies just as long will we fail to get anywhere in maintaining our economic independence. On the other hand, it is a pity that insurance companies cannot realize that the best services are the cheapest services, and when they antagonize the better trained and more experienced medical men they are forced to get their services from the ambulance chasing doctors and others who are willing to take work for what they can get out of it. The insurance company is getting the worst end of the bargain. The old adage "penny wise and pound foolish" applies in buying medical services just as it applies in buying anything else.

A very intelligent lay person recently made the remark, "Why do so many doctors attempt work for which they are not fitted by education or training, and why do so many doctors attempt to give advice concerning diseased conditions of which they know absolutely nothing?" The occasion for the remark was brought about as follows: A young boy suffering from partial deafness due to nonsuppurative otitis media, occasioned by two very large tonsils and an enormous bunch of adenoid tissue in the nasopharynx, was operated by a general physician,

a very bungling and imperfect operation being performed, and afterward told that because the operation did not relieve the deafness the child had an incurable disease of the auditory nerve and should be placed in a deaf and dumb asylum. Aside from the bad surgery, which never should have been attempted by one so untrained, the patient had never had a functional examination to determine the nature of the deafness, and he never had the advantage of appropriate treatment which later restored the child to normal hearing though not bringing about a normal throat that had been mutilated by the bad surgery.

We certainly have no right to complain about the incompetency of the pseudo-medical cults and the damage done by them when we have so many men in the regular medical profession who will attempt anything in the line of medical or surgical treatment, even though not fitted by education or training for it, and the poor patient suffers in consequence. To top the thing off we have a habit of defending these chaps to the public when they do bungling work, and we seldom if ever bring them to task in our medical societies or in private for what is unquestionably malpractice. It is rank commercialism and the desire to secure fees which prompts a lot of ill trained men to attempt surgery and other work for which they are not fitted. We have the greatest admiration for the man who frankly says, "This work should be done by someone who is better qualified than I am to do it," and then proceeds to qualify himself for future work of that character by doing postgraduate work and receiving special training which fits him for that which previously he was ill prepared to do. We often wonder why the public places any more faith in the medical profession as a class than they place in the pseudo-medical cults, for it is such examples as the one cited, of which there are many similar occurring all over the land, which place us on the same plane with the medical pretenders. It certainly is time for introspection and then a house cleaning.

How Is It?

That when a doctor sends a bill to a fellow for \$50 for two weeks' treatment pulling him through a critical case of pleuro-pneumonia he hollers for the police—and when the lawyer sends him a bill for the same amount for one hour's appearance in court he thinks he's getting off cheap?

That when a plumber, butcher, baker or milkman jumps into a creek or salt meadow to save an old soak from drowning himself, the papers hail him as a hero and Congress presents him with a life-saving medal—and when the doctor, through the use of brain and trained skill of

a highly specialized order, working night and day, saves the life of a useful citizen, it is considered just duty done and no hero medal is awarded or even mention of the incident?

That when the tired doctor seeking needed relaxation like other folks, steals away for a few hours from his office to go to a show, or for a week-end in the country, he is grilled and toasted for neglecting his patients—and when a preacher, a lawyer, an engineer or any other professional man does the same thing, not an unfriendly word is said or unfriendly criticism made of the circumstance?

That when a baby is named by an appreciative mother after the family physician who brought it into the world, folks snicker, shrug their shoulders suspiciously and whisper, "I told you so"—and when it is named after a politician, soldier, captain of industry or a banker, it is accepted as a matter of course and no thought of suspicion is ever excited over the incident?

That when the doctor squeezes the hand of a pretty woman patient, or pinches her on the cheek, it is food for hostile gossip—and when the dominie does likewise it is just a token of spiritual solicitude for her health?

That when a fellow owes money to his doctor, he assumes an injured feeling when pressed to pay—and when pressed by his banker to pay is obsequiously deferential and polite?

That when no merchant on earth will give a fellow credit for a nickel's worth of merchandise, or call at his home on anything except a cash basis—the doctor will trust him and his family for hundreds of dollars' worth of service and never desert him while he is in need of help?

That when medical men ask an appropriation to protect a community from disease and death, legislators turn it down as a needless dissipation of public funds for "foolish medical experiments" and when a politician interested in promoting a new type of street sweeper, water cooler or office rugs asks a similar appropriation, he gets it P. D. Q.?

How Is It?

—Program LaPorte County Medical Society, October 13, 1922.

DEATHS

J. LEVI LORD, M.D., died at his home in Mays, October 17. Dr. Lord was 63 years old. He graduated from the Medical College of Indiana, Indianapolis, in 1882.

WILLIAM L. PARR, M.D., died at his home in Evansville, October 11, at the age of 43 years. Dr. Parr graduated from the Hospital College of Medicine, Louisville, Kentucky, in 1906.

REUBEN R. TIDRICK, M.D., of Bringhurst, died September 19 at the age of 81 years. Dr. Tidrick was a graduate of the Medical College of Ohio, Cincinnati, in 1866. He was not in active practice at the time of his death.

FRANK RANDOLPH, M.D., of Elkhart, was fatally injured when his automobile was struck by a freight train at Lagrange, September 24. Dr. Randolph was 57 years of age. He graduated from the University of Michigan Medical School, Ann Arbor, in 1892.

ROBERT F. PALMER, M.D., of Frankfort, died October 2 at the age of 67 years. Dr. Palmer was founder of the Palmer Hospital, at Frankfort, and had been at the head of that institution for twenty-three years. He was a graduate of the Hospital College of Medicine, Louisville, Kentucky.

JOSEPH B. LENNEY, M.D., died at his home in Crown Point, September 29, at the age of 59 years. He graduated from the Baltimore University School of Medicine, Maryland, in 1890. Dr. Lenney had been an invalid for many years and had not been in active practice.

HENRY E. GREENE, M.D., died at his home in Crawfordsville, October 2, at the age of 55 years. Dr. Greene graduated from the University of Michigan Medical School, Ann Arbor, in 1891. He was a member of the Montgomery County Medical Society, the Indiana State Medical Association and the American Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION. Patronize these advertisers, for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

THE Benton County Medical Society met at Fowler, October 4.

DR. J. E. RARICK has moved into his new building at Wolcottville, Indiana.

MISS ROSEMARY KELNER has been made superintendent of the Wabash County Hospital.

DR. H. N. OLIPHANT has purchased the interests of the late Dr. R. F. Palmer, in the Palmer Hospital at Frankfort.

DR. H. N. OLIPHANT, of Frankfort, has been made chief surgeon of the Toledo, St. Louis and Western railroad.

DR. E. C. GARBER, of Dunkirk, has been freed of the charge of malpractice brought against him by Mrs. Osborne of Muncie.

THE Washington County Medical Society held a meeting at Salem, October 5. A paper was presented by Dr. L. W. Paynter.

DR. J. H. TAYLOR, of Indianapolis, has resumed his work in pediatrics after an absence of four months in Europe and the Orient.

DR. C. R. SOWDER has announced the opening of his office at No. 7, The Cambridge, Indianapolis, limiting his practice to internal medicine.

DR. R. G. IRKINS has announced the removal of his office to the fourth floor, Schultz Building, Fourth and Main Streets, Lafayette, Indiana.

DR. C. L. BARTLETT has resigned as head of the laboratories of the St. Joseph's Hospital, South Bend, to go to China for the Rockefeller Institute.

THE Carroll County Medical Society held a meeting October 13 at Flora. Dr. A. C. Arnett presented a paper. The meeting was preceded by a banquet.

THE Madison County Medical Society held a meeting at the Grand Hotel, Anderson, October 17. Dr. Frank Gregor, of Indianapolis, presented a paper.

DR. E. R. SMITH has announced the opening of offices in the Hume-Mansur building, Indianapolis. Dr. Smith has limited his practice to neuro-psychiatry.

THE Huntington County Medical Society gave a banquet, October 12, honoring Dr. C. H. Good, the new president of the Indiana State Medical Association.

THE Howard County Medical Society held a meeting at Kokomo, October 6. Dr. Robert Moore, of Indianapolis, presented a paper on "Auricular Fibrillation".

A JOINT meeting of the Bartholomew, Jackson and Jennings county medical societies was held at Seymour, October 5. Two papers were presented at this meeting.

DR. FLETCHER HODGES, of Indianapolis, who was injured in an automobile accident in January, has returned from a tour of Central Europe and the British Isles.

MISS INA GASKILL, of Indianapolis, was elected president of the Indiana State Nurses' Association at the meeting held at the Lincoln Hotel, Indianapolis, October 4.

THE Huntington County Medical Society held its regular monthly meeting at Huntington, October 3. A paper on "Consultations" was presented by Dr. R. A. Hoover, of Bippus.

A JOINT session of the American College of Surgeons and the Ohio Valley Medical Association will be held at Evansville, December 4, with headquarters at the Hotel McCurdy.

MISS MARY M. PETERSON, of Indianapolis, was re-elected president of the Indiana State League of Nursing Education at the meeting held at the Hotel Lincoln, Indianapolis, October 2.

DR. A. C. ARNETT announced the removal of his office to the fourth floor of the Schultz Building, Fourth and Main Streets, Lafayette. His practice is limited to surgery and gynecology.

DR. FRANK S. CROCKET has announced the removal of his office to the fourth floor, Schultz Building, Fourth and Main Streets, Lafayette, Indiana. His practice is limited to surgery, urologic and rectal.

DR. O. H. SMITH, Mt. Vernon, Iowa, has been commissioned to assist the China medical board by the Rockefeller Foundation. Dr. Smith formerly was head of the physics department of Cornell college.

THE Eighth District Medical Society held its annual meeting at Muncie, October 27. Dr. Frederick A. Besley, of Chicago, presented a paper on the subject of "The Problem of Sarcoma of the Extremities".

THE city board of health of Indianapolis has appointed Drs. J. L. Conley, Martha J. Smith, William Wise, Joseph Ward, F. R. Carter and E. T. Gaddy as full-time medical inspectors of the city schools of Indianapolis.

THE fifty-first annual meeting of the American Public Health Association was held at Cleveland, Ohio, October 16 to 19. Public health workers from all over the United States, Canada, Mexico and Cuba attended.

THE Seventh District Medical Society held a meeting at Indianapolis, October 26. Papers were presented by Drs. A. S. Jaeger, Indianapolis; O. T. Seamahorn, Pittsboro, Edgar F. Kiser, Indianapolis, and Hugh T. Patrick, of Chicago.

DR. G. W. H. KEMPER returned to his home at 1239 East Orange Grove Avenue, Pasadena, California, on October 24, after having made an extended visit in Indiana. Dr. Kemper attended the Muncie session of the Indiana State Medical Association.

DR. HARVEY MURDOCK has been permanently appointed to serve in the capacity of clinician at the Irene Byron Tuberculosis Hospital, Fort Wayne. Dr. Murdock succeeds Dr. F. H. Gebhardt, who has resigned to accept a position as state clinician for the state of Michigan.

THE Fountain-Warren County Medical Society held a meeting October 12 at Williamsport. Dr. Robert McGaughey, of Danville, presented a paper on "Medical Diagnosis of Appendicitis" and Dr. A. Merrill Miller, also of Danville, presented a paper, his subject being "Surgery of Appendicitis".

A NEW division, that of child hygiene, has been established as a part of the city health department of Indianapolis. Clinic stations will be established in different parts of the city, chiefly the poorer sections. Paul D. Kirby, until recently secretary of the Children's Aid Association, will be at the head of this new division.

THE Indiana Tuberculosis Association has made public a plan of interstate cooperation in anti-tuberculosis work in efforts to study methods used in combating the "white plague". Indiana, Michigan, West Virginia and Ohio will pool their executives' headquarters at the beginning of the annual tuberculosis Christmas seal sale, and will work cooperatively in this campaign.

THE Indiana Division of the American College of Surgeons will hold its annual meeting at Evansville, December 4 and 5, at the Hotel McCurdy, under the direction of Dr. James Y. Welborn, Evansville, chairman, and Dr. E. M. Shanklin, Hammond, secretary. The Ohio Valley Medical Association will merge their annual meeting with the College. A program of unusual interest and value has been prepared, beginning at 9 a. m., December 4, with a series of clinics at the Evansville hospitals in charge of the Evansville members of the College. Speakers on the scientific program include Dr. John B. Deaver of Philadelphia, Dr. Allen B. Kanavel of Chicago, Dr. Hugh Cabot of Ann Arbor, and Dr. Charles Reed of Chicago. A public meeting will be held on the evening of December 4, at which the Rev. C. B. Moulinier, president of the Catholic Hospital Association, and Dr. MacEachern, of Canada, will speak.

using only American-made synthetics, and referring to them at all times by their American names, as suggested by the Council on Pharmacy and Chemistry of the American Medical Association.

DURING October, the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

Lederle Antitoxin Laboratories:

Diphtheria Toxin-Antitoxin (0.1L+.)

H. A. Metz Laboratories, Inc.:

Alumnol.

H. K. Mulford Company:

Hay Fever Timothy Pollen Extract-Mulford.

Parke, Davis & Company:

Normal Horse Serum-P., D. & Co.

Rabies Vaccine (Cumming)-P., D. & Co.

E. R. Squibb & Sons:

Acne Vaccine.

Colon Vaccine-Squibb.

Gonococcus Vaccine.

Meningococcus Vaccine.

Normal Horse Serum.

Pertussis Vaccine, Curative.

Pertussis Vaccine, Immunizing.

Purified Diphtheria Antitoxin (Anti-diphtheric Globulin).

Pneumococcus Vaccine.

Staphylococcus Vaccine.

Staphylo-Acne Vaccine.

Streptococcus Vaccine.

Tetanus Antitoxin Purified.

Typhoid Vaccine.

Typhoid Vaccine Combined, Immunizing.

SOCIETY PROCEEDINGS

COUNCILORS' MEMBERSHIP CONTEST

District	Councilor	Number of Counties	1921 Memberships	1922 Memberships to Date	Percentage
First.....	Dr. Willis	7	176	175	.99
Second.....	Dr. Smadel	7	149	145	.96
Third.....	Dr. Leach	9	130	118	.90
Fourth.....	Dr. Osterman	10	138	136	.98
Fifth.....	Dr. Weinstein	5	158	163	1.03
Sixth.....	Dr. Spilman	8	150	160	1.07
Seventh.....	Dr. Earp	4	425	444	1.04
Eighth.....	Dr. Conrad	5	172	168	.97
Ninth.....	Dr. Moffitt	10	253	256	1.01
Tenth.....	Dr. Shanklin	5	151	145	.96
Eleventh.....	Dr. Black	6	191	194	1.02
Twelfth....	Dr. Calvin	8	241	247	1.02
Thirteenth..	Dr. Berteling	8	274	256	.93
		92	2608	2607	

KOSCIUSKO COUNTY MEDICAL SOCIETY

At a regular meeting held October 31, 1922, the Society adopted the following:

1. That House bill No. 267, which this society endorsed during the last session of the legislature, be reintroduced early at this coming session of the legislature.

2. That the following amendment (suggested by the Gibson County Medical Society) be added to House Bill No. 267:

"For the purpose of enforcing the provisions of this Act it is hereby made the duty of the Judges of the several Circuit and Superior Courts in this State, and they are hereby expressly granted power so to do, on proper showing made that any person in said State is practicing medicine without a license as defined herein, to grant temporary and permanent injunctions restraining and enjoining such persons from continuing so to practice medicine in this State until such person or persons have complied with the provisions herein provided."

Should House Bill No. 267 not pass, then we recommend that the above be reintroduced as an amendment to the old law.

3. That the Committee on Public Education (Page 367, October, 1922, issue of the *Journal of the Indiana State Medical Association*) be supplied with sufficient funds by the State society to carry on a thorough and well-balanced statewide education of the public through the press and otherwise.

4. That we all try to realize more keenly than ever that it is our uncured patients who grasp at the straw held out to them by the fanatic, the knave and the uneducated.

5. That a copy of this report (if approved by this society) be sent tomorrow by the secretary to both candidates for State Representative from our County and to our State Senator, with request that replies be sent to our secretary, stating their views on paragraphs 1 and 2.

6. That a copy of this report (if approved by this society) also be sent to the following:

a. Chairman of State Committee on Legislation.
b. Chairman of the State Committee on Public Education.

c. President of Indiana State Medical Association.
d. Secretary of the Indiana State Medical Association.

e. Journal of the Indiana State Medical Association.

f. Gibson County Medical Society.

TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

TUBERCULIN (OLD) AND CONTROL FOR THE PIRQUET TEST.—A preparation of tuberculin-Koch (see New and Nonofficial Remedies, 1922, p. 293) marketed in packages containing three sealed glass tubes of tuberculin, each tube containing tuberculin sufficient for one test and three tubes of control material. Parke, Davis & Co.

TUBERCULIN OINTMENT FOR THE MORO TEST.—A preparation of tuberculin-Koch (see New and Nonofficial Remedies, 1922, p. 293) marketed in collapsible tubes containing 2 Gm. of an ointment consisting of 50 percent of tuberculin-Koch and 50 percent of anhydrous wool fat. Parke, Davis & Co., Detroit. (*Jour. A. M. A.*, Sept. 9, 1922, p. 897.)

PYRAMIDON TABLETS, 5 GRAINS.—Each tablet contains pyramidon (see New and Nonofficial Remedies, 1922, p. 251), 5 grains. H. A. Metz Laboratories, Inc., New York.

NOVOCAIN SOLUTION 1 PERCENT AMPULES.—Each contains novocain, 0.06 Gm. (1 grain), sodium chloride, 0.036 Gm. (½ grain), and distilled water, 6 Cc. (90 minimis). H. A. Metz Laboratories, Inc., New York.

AMPULES RADIUM CHLORIDE, 2 Cc. (United States Radium Corp.)—Radium element, 5 micrograms. For a discussion of the actions, uses and dosage of radium see New and Nonofficial Remedies, 1922, p. 252. United States Radium Corporation (formerly Radio Chemical Corp.), New York (see New and Nonofficial Remedies, 1922, p. 261).

AMPULES RADIUM CHLORIDE, 2 Cc.—United States Radium Corp. (Radium element, 10 micrograms). Radium Chemical Corporation, New York.

AMPULES RADIUM CHLORIDE, 2 Cc.—United States Radium Corp. (Radium element, 25 micrograms). United States Radium Corporation, New York.—(*Jour. A. M. A.*, Sept. 23, 1922, p. 1049.)

FERRO-SAJODIN.—**FERIOBEN.**—Ferro-sajodin is a basic, ferric iodobenenate, containing at least 5 percent of iron and at least 24 percent of iodine. It has the actions of iodides and iron but is claimed to be more stable and palatable than ferrous iodide, not to injure the teeth or to disturb the gastro-intestinal tract and that it is free from a constipating tendency. It is claimed that ferro-sajodin is easily absorbed but slowly eliminated, thus insuring a more prolonged effect than that obtained from inorganic iodides and iron compounds. Ferro-sajodin is indicated in conditions in which iron and iodides are employed, such as anemia, rickets, syphilis, chronic bronchitis and arteriosclerosis with anemia. Ferro-sajodin is marketed only in the form of Ferro-sajodin tablets, 8 grains. Winthrop Chemical Co., Inc., New York.—(*Jour. A. M. A.*, Sept. 30, 1922, p. 1136.)

NOVOCAIN AND L-SUPPARENIN TABLETS "H".—Each tablet contains Novocain 0.06 Gm. (1 grain) and 1-supprarenin synthetic 0.00006 Gm. (1/1000 grain). For a discussion of the actions, uses and dosage of procaine, see New and Nonofficial Remedies, 1922, p. 36. H. A. Metz Laboratories, Inc., New York.—(*Jour. A. M. A.*, Sept. 23, 1922, p. 1049.)

HAYFEVER TIMOTHY POLLEN EXTRACT-MULFORD.—The liquid is obtained by extracting the proteins from the pollen of timothy. For a discussion of actions, uses and dosage, see the article on Pollen and Epidermal Extracts, Preparations and Biologically Reactive Food Proteins, New and Nonofficial Remedies 1922, p. 232. This preparation is marketed in packages containing fifteen consecutive doses for a complete treatment and also in packages containing partial treatments only. H. K. Mulford Co., Philadelphia.

PURIFIED DIPHTHERIA ANTITOXIN (ANTIDIPHTHERIC GLOBULIN).—Concentrated diphtheria antitoxin (New and Nonofficial Remedies 1922, p. 280) is marketed in syringe containers of 1,000 units and in syringe containers of, respectively, 3,000, 5,000, 10,000 and 20,000 units. E. R. Squibb & Sons, New York.

NORMAL HORSE SERUM.—This product (New and Nonofficial Remedies 1922, p. 278) is also marketed in packages of one 10 Cc. syringe. E. R. Squibb & Sons, New York.—(*Jour. A. M. A.*, Oct. 21, 1922, p. 1427).

ALUMINUM COMPOUNDS.—Several aluminum compounds are official, including the ordinary alum. The acetate and acetotartrate of aluminum are used in the form of solutions described in the National Formulary. Aluminum compounds are used for their astringent action. They are not so astringent as the lead salts, but they may exert an irritant and even caustic action when used in the form of concentrated solutions or as "burnt" alum. Aluminum compounds are slightly antiseptic. Proprietary preparations of aluminum in combination with organic acids have been introduced with a view of utilizing the astringent and antiseptic properties of their components.

ALUMNOL.—The aluminum salt of betanaphthol-disulphonic acid. Alumnol is used as a mild antiseptic and, in concentrated solutions, as an irritant or caustic. It is used for destruction of the gonococcus in gonorrhcea. H. A. Metz Laboratories, Inc., New York.

NOVOCAIN BASE.—Para-amino-benzoxydiethylaminoethane. The base contained in procaine. The action and uses of novocain base are the same as those of procaine (New and Nonofficial Remedies 1922, p. 36), but it is soluble in fixed oils. H. A. Metz Laboratories, Inc., New York.

NOVOCAIN NITRATE.—A brand of procaine nitrate—N. N. R. (New and Nonofficial Remedies 1922, p. 37). It has the actions and uses of procaine, but is compatible with silver salts. H. A. Metz Laboratories, Inc., New York.

DIPHTHERIA TOXIN-ANTITOXIN MIXTURE (0.1L+).—A diphtheria toxin-antitoxin mixture (New and Nonofficial Remedies 1922, p. 282) containing 0.1 lethal dose of diphtheria toxin neutralized with the required amount of diphtheria antitoxin. Marketed in packages of three vials, each containing 1 Cc.; also in packages of thirty vials, each containing 1 Cc. Lederle Antitoxin Laboratories, New York.

ACNE VACCINE.—Acne bacillus vaccine (New and Nonofficial Remedies 1922, p. 298) is marketed in packages of four syringes containing, respectively, 50, 100, 250 and 500 million killed bacilli; in packages of four ampules containing, respectively, 50, 100, 250 and 500 million killed bacilli (with a syringe); in vials of 5 Cc., 10 Cc. and 20 Cc., each cubic centimeter containing 1,000 million killed bacilli. E. R. Squibb & Sons, New York.

GONOCOCCUS VACCINE.—This product (New and Nonofficial Remedies 1922, p. 301) is marketed in packages of four syringes containing, respectively, 100, 250, 500 and 1,000 million killed gonococci; in packages of four ampules containing, respectively, 100, 250, 500 and 1,000 million killed gonococci (with a syringe); in vials of 5 Cc., 10 Cc., and 20 Cc., each cubic centimeter containing 1,000 million killed gonococci. E. R. Squibb & Sons, New York.

MENINGOCOCCUS VACCINE, CURATIVE.—Meningococcus vaccine (New and Nonofficial Remedies 1922, p. 302) is marketed in packages of four syringes containing, respectively, 100, 250, 500 and 1,000 million killed meningococci; in packages of four ampules containing, respectively, 100, 250, 500 and 1,000 million killed meningococci (with a syringe); and in vials of 5 Cc., 10 Cc. and 20 Cc., each cubic centimeter containing 1,000 million killed meningococci. E. R. Squibb & Sons, New York.

PERTUSSIS VACCINE, CURATIVE.—Pertussis bacillus vaccine (New and Nonofficial Remedies 1922, p. 303) is marketed in packages of four syringes containing, respectively, 100, 250, 500 and 1,000 million killed bacilli; in packages of four ampules containing, respectively, 100, 250, 500 and 1,000 million killed bacilli (with syringe); and in vials of 5 Cc., 10 Cc. and 20 Cc., each cubic centimeter containing 2,000 million killed bacilli. E. R. Squibb & Sons, New York.

PERTUSSIS VACCINE, IMMUNIZING.—Pertussis bacillus vaccine (see New and Nonofficial Remedies 1922, p. 303) is marketed in packages of three syringes containing, respectively, 500, 1,000 and 1,000 million killed bacilli; in packages of three ampules containing, respectively, 500, 1,000 and 1,000 million killed bacilli (with a syringe). E. R. Squibb & Sons, New York.

PNEUMOCOCCUS VACCINE.—This product (New and Nonofficial Remedies 1922, p. 304) is a suspension of killed pneumococci Types I, II, III and Group IV in equal proportions. Marketed in packages of four syringes containing, respectively, 100, 250, 500 and 1,000 million killed pneumococci; in packages of four ampules containing, respectively, 100, 250, 500 and 1,000 million killed pneumococci (with syringe); and in vials of 5 Cc., 10 Cc. and 20 Cc., each cubic centimeter containing 5,000 million killed pneumococci. E. R. Squibb & Sons, New York.—(*Jour. A. M. A.*, Oct. 28, 1922, p. 1519).

(Continued on Adv. page xx)

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SPAHLINGER'S TREATMENT FOR TUBERCULOSIS.—Spahlinger, according to reports, was a lawyer who abandoned his profession for research work. He appears now to be connected with the Bacterio-Therapeutic Institute, Geneva. According to an article by Spahlinger, the treatment utilized either one or both of two therapeutic principles depending on the nature of the infection. In acute cases, passive immunization with special serums is used. In chronic afebrile pulmonary cases, in non-pulmonary forms and in cases "predisposed to" tuberculosis, active immunization with special antigens is employed. No definite information in regard to the preparation of the product is given. Reports that the British Red Cross is to purchase the treatment are unconfirmed. Reports that the Rockefeller Institute had made an offer to secure the rights for the product in the United States proved unfounded. The exact nature of the Spahlinger treatment does not appear to have been divulged, the treatment is in the experimental stage and the reported results lack confirmation.

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to be similar in composition to solution of gold and arsenic bromid of the National Formulary. This contains bromid of gold and arsenic acid. Gold preparations were at one time believed to have therapeutic value, particularly as "alteratives". They have proved inefficient and have been discarded.—(*Jour. A. M. A.*, Oct. 21, 1922, p. 1446).

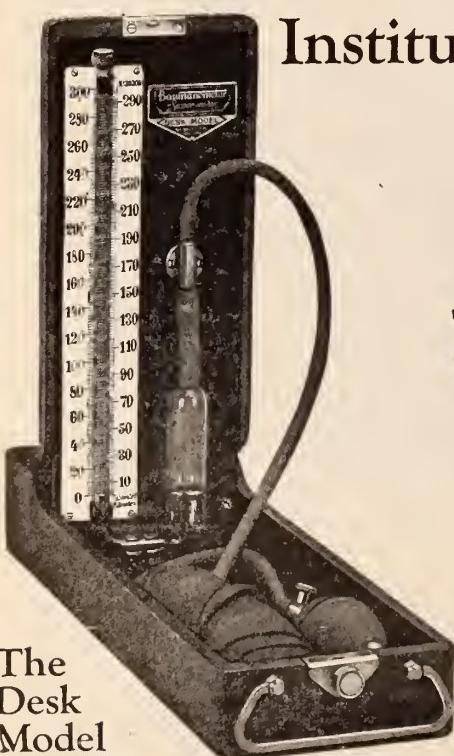
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PRESENT STATUS OF THE USE OF DRUGS IN HEART DISEASE

(Continued from page 390)

tachycardia, the action of quinidin is uncertain or useless. Occasionally, premature beats can be abolished, but they recur on stopping the drug. Quinidin should not be used indiscriminately for arrhythmia, and should not be administered simply because a patient with heart disease is not doing well, his physician having heard vaguely of the new cardiac therapy with quinidin. It is in auricular fibrillation of recent origin, without heart failure or pronounced mitral stenosis, that quinidin therapy seems at present to be especially indicated.

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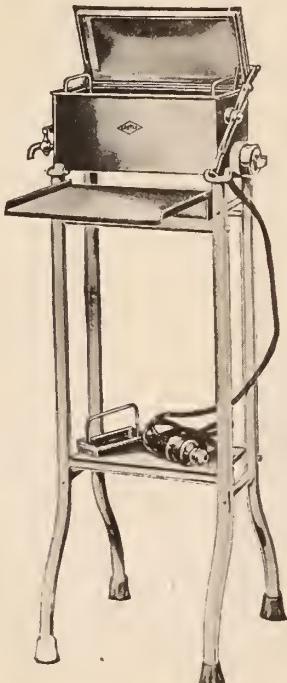
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THE JOURNAL OF THE Indiana State Medical Association

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ISSUED MONTHLY under the Direction of the Council

VOLUME XV
NUMBER 12

FORT WAYNE, IND., DECEMBER 15, 1922

Per Year, \$3.00
Single Copy, 30 Cents

CONTENTS

	Page
ORIGINAL ARTICLES	
The Trend of Neurological Surgery. Charles H. Frazier, Philadelphia.....	405
Endocrinology in Its Medical Aspects. G. W. McCaskey, Fort Wayne.....	409
The Neurological Phase of Endocrinology. C. C. Bitler, Newcastle.....	414
Surgical Aspects of Endocrinology. W. D. Gatch, Indianapolis.....	423
Epidemic Jaundice. S. C. Waters, Middletown.....	430
EDITORIALS	
Our Holiday Message.....	435
Exaggerated Claims for Medicinal Preparations.....	435
Poor California.....	436
Editorial Notes.....	437
DEATHS	
William Y. Wells, Laketon; T. B. Ritter, Orleans; William H. Butler, Richmond; Frank C. Hess, Cadiz; Joseph L. Preston, Cloverdale; Albert May, Crothersville; John N. Records, Robert E. Marshall, Elwood; Warren D. Calvin, Fort Wayne	412
MISCELLANEOUS	
News Notes and Personals.....	442
SOCIETY PROCEEDINGS	
Councilors' Membership Contest.....	444
Muncie Academy of Medicine.....	444

(Continued on Page viii)

Next Annual Session, Terre Haute, Sept. 26, 27, 28, 1923. List of Officers and Committees on Adv. Page 1.
Entered as Second Class Matter, January 20, 1908, at the Postoffice at Fort Wayne, Indiana, under Act of
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ALBERT E. BULSON, Jr., B.S., M.D., Editor and Manager

OFFICE OF PUBLICATION: 406 West Berry Street, FORT WAYNE, INDIANA

VOLUME XV

DECEMBER 15, 1922

NUMBER 12

ORIGINAL ARTICLES

THE TREND OF NEUROLOGICAL SURGERY*

CHARLES H. FRAZIER, M.D.
PHILADELPHIA

Neurological surgery in the past decade has made notable strides and its recognition as a specialty has been fully justified and imperative. The time-consuming study of the individual case and the time-consuming operation are prohibitive of practice in other fields. In claiming for neurological surgery a field separate and apart from that of general surgery, I have not in mind the mastery of technical details; but the necessary understanding of the physiology, anatomy and pathology of the nervous system and of the knowledge of when and how to deal with the problems and complications exclusively those of intracranial operations. Before this assembly it seems more appropriate to review the field of neurological surgery as a whole, rather than to dwell at length and in detail upon one specific problem, and first a word as to meningitis.

Meningitis, suppurative meningitis, is not an operable condition. Let us admit once and for all that one cannot drain the subarachnoid space as one would the pleural and peritoneal cavity, and abandon what I have always regarded as a futile practice, the introduction of drainage tubes into the basal cisterns, an operation which every once in a while finds a new advocate. We must wait patiently for the time when serum therapy in the treatment of pyogenic infection generally has become effective.

I am disposed to believe that as a sequella of certain infectious diseases, particularly influenza and whooping cough, there develops a meningitis of the serous type, which in its clinical expression may simulate brain tumor insofar as it gives rise to signs of increased intracranial pressure and occasionally to focal phenomena. In my clinic there have been several cases of this kind, where the subsidence of symptoms and ultimate recovery following a decompressive operation may be offered as contributory evidence of this hypothesis.

In the management of intracranial trauma, and I refer chiefly to the severe contusions and lacerations, with or without fractures, we have been forced to realize that only in the minority of cases can we, by active surgical means, reduce the mortality. We have learned by experimental study and by the examination of autopsy material that apart from the hemorrhages and lacerations an essential process in the pathology of brain trauma is an edema, a definite increase in the water content of the brain. The precise origin of the edema is still a matter of speculation, but of its presence there is no doubt, nor is there any doubt that it is responsible, as it spreads rapidly to the brain stem, for many of the fatal cases. Only by recognition of this fundamental process can we appreciate the inevitable failure to relieve the symptoms and to save the patient's life by a decompressive operation, an operation all too frequently and indiscriminately practiced in intracranial trauma. Subtemporal decompression will save life occasionally, where the increase of intracranial pressure indirectly interferes with the circulation of the medulla, but when the medulla is itself the seat of the lesion, a subtemporal decompression will be of no avail.

We have added recently to our therapeutic agents for the treatment of certain intracranial complications sodium chloride as a dehydrating agent. But unfortunately it has not proven effective in checking an advancing edema. *A priori* one might have presumed that, in the treatment of an edema, a dehydrating agent would be in the nature almost of a specific, but experience has shown us that, while the administration of sodium chloride promotes the absorption of fluid in striking fashion, when the fluid is free in the ventricles or in the subarachnoid space, we must acknowledge its inefficacy as now used in saturated solution or half strength when the fluid is tissue bound, as in a diffuse edema. Here is a fruitful field for investigation and experimental study.

However, sodium chloride therapy, intravenously or by mouth, has proved of immeasurable value under certain circumstances and has become an accepted agency in our management of certain intracranial problems; in reducing brain volume when exploring the brain under

(*) Address on Surgery presented before the Surgical Section of the Indiana State Medical Association at the Muncie session, September, 1922.

extreme tension; when closing the wound under similar circumstances; as a means of relieving the terrific headache of a tight brain; or as a method of determining whether a tense cerebral hernia is due to a large tumor or to a dilated ventricle.

As infections and trauma in the domain of neurological surgery are, relatively speaking, minor issues, so the major issue may be said to be brain tumor, and let me preface my remarks on this chapter of brain surgery by reminding you that the time has come when either for purposes of discussion or for reviewing the possibilities of surgical therapy the subject must be subdivided. Just as the term "indigestion" or "dyspepsia" has been abandoned as too general and we now refer specifically to the lesion of the stomach at fault, whether ulcer, carcinoma, dilatation or what not, so with brain tumors the time has come when we must, for the purpose of discussion, recognize different problems according to the nature and the location of the tumor. Too often I think the general practitioner throws up his hands in despair when brain tumor is suspected and allows the lesion to continue with its inevitably fatal consequences if unexplored. He should realize that there are in the brain, as elsewhere, tumors that are distinctly operable as well as those distinctly inoperable, and that without exploration it is often impossible to determine to which of these classes the tumor may belong. Hence, wherever localization is possible, the patient is entitled to an exploratory operation. An endothelioma with its origin from the meninges, with its firm encapsulation as a rule is readily removed; so too the enchondroma, the osteoma, the psammoma and occasionally the tuberculum.

The fibro-neuroma of the acoustic nerve is a relatively benign lesion, as a rule presents a characteristic clinical picture and is therefore readily localizable, not difficult of approach, and, when not too far advanced, not difficult of removal. Here are very definite and distinct groups, presenting different clinical pictures, offering different surgical problems and each with its percentage of operative risk and eventual recovery. And quite distinct and apart from these are the gliomata, infiltrating and diffuse, only occasionally encapsulated, usually deep seated, often difficult of localization in the early stages and often impossible to remove *in toto*. But even with this unfavorable surgical type there are extenuating circumstances. As they increase in size, the central portion undergoes degenerative changes and this degenerative process with cell necrosis spreads toward the periphery until the tumor is converted into a large cystic cavity; occasionally a remnant of the tumor may be found as a nubbin on the cyst wall.

Such was the case in a lad of 9 (File No. 65844) who six months prior to his admission to the university hospital developed at first twitching about the right side of the face and then general convulsions. Because of the hemiparesis, localization was not difficult and the exploration revealed a large cyst. The evacuation of the cyst gave entire relief. A year later the patient returned with signs of recurring pressure and with our knowledge of the topography of the cyst, it was a simple matter to evacuate it, again with gratifying results.

Therefore, while fully recognizing the surgical limitations of these gliomatous tumors, and our inability to practice complete extirpations in many instances, let us not abandon them as utterly hopeless. Beside spontaneous metamorphosis from a solid to a cystic tumor, I am constrained to believe that the progress of the growth may be retarded in certain occasions by radium therapy. While not prepared to quote end results, as we have a number of cases still under observation and treatment, I am convinced that in certain of these life is being prolonged, perhaps eventually to be saved, by the combined effects of surgery and radium therapy.

We have almost outlived the era when the suspicion of syphilis was attached to most brain lesions and for weeks or months iodides and mercury were administered in enormous doses. But an occasional example of this old-time tradition may be offered in evidence that the lesson has not been learned. A few months ago I removed a large encapsulated endothelioma from a patient who for five years had been treated, now casually, now intensively, as a syphilitic, despite the fact that the Wassermann reaction had always been negative. The patient was almost completely hemiplegic, and, had it not been that painful convulsive movements developed, the true nature of his lesion probably never would have been revealed.

The frequency of convulsive seizures, as an expression of brain tumors, is not usually appreciated. In approximately 10 percent do we find convulsions as a conspicuous, and sometimes for a considerable time the only, manifestation of tumor. These convulsive seizures may be Jacksonian in type or general; in the former instance when the tumor is in or encroaches upon the motor zone, in the latter when there is a secondary hydrocephalus. As a rather striking example of the former, I may cite the case of a patient who for ten years had been treated as an epileptic subject. Only three months prior to my first observation did signs of increased pressure develop, with attacks of headache and occasional vomiting. The diagnosis and the localization of the tumor was readily confirmed in this case by the roentgenogram, which showed with extraordinary clearness the shadow of the calcified tumor. In this case

there was perhaps some justification for the late verification of the diagnosis since, following the attacks, there was no weakness of the extremities. This is a rather characteristic feature of the focal convulsions of brain tumor, and should always arouse one's suspicion. The following abstract of a clinical record tells the story: While at the onset of his illness the patient had a violent pain in the right arm, which, with the face, began to twitch, he did not lose consciousness but for several days he was unable to talk and was partially hemiplegic. From these symptoms he soon completely recovered. An interval of two years elapsed before he had a second attack, differing from the first in that the arm alone was involved. From then there was a gradual loss of power until, when I saw him five years after the onset of his illness, he had become almost completely hemiplegic. A tumor of considerable dimensions was found and readily removed. This is a very instructive clinical record.

A study of the life history of brain tumors is intensely interesting. The impression prevails very generally I think that practically all brain tumors are malignant and as malignant growths elsewhere they run their course in one or two years. Far as this is from the truth, a rather striking feature of the life history of brain tumors is the variation in the rate of growth, and yet because among other things one finds great variations in the rate of growth and because of periods of latency, the precise duration of the growth in the individual case is a matter of conjecture. As an illustration of this latent period I am reminded of a patient in the person of a physician who, until within six weeks of the date of admission had been, so far as he knew, absolutely symptom free. The suddenness of onset and other phenomena pointed suspiciously to encephalitis lethargica. Before an exploration was even considered the patient died and the autopsy revealed a huge infiltrating glioma extending almost from base to cortex. Sometimes, I fear, forgetting these latent periods we are too critical in our attitude toward the physician, who brings his patient to the surgeon when the growth has attained great proportions, and reached perhaps an inoperable stage.

The diagnosis of brain tumor is not as a rule difficult, although one occasionally, as in the case above described, may be misled. To make the diagnosis on the signs of intracranial tension, headache, papilloedema, and vomiting, avails us little since this triad of pressure symptoms gives no clue as to localization. Furthermore, like the metastatic lesions of a carcinoma, it usually betokens a late stage of the disease.

Insofar as concerns tumors of the occipital lobe and parietal lobes, of the zones representing the motor, visual, auditory and speech centers, localization is readily made. Lesions of

the frontal lobe still present problems and confusion with the psychoses cannot be eliminated in the absence of signs of pressure. While the right temporal lobe was once looked upon as a silent zone, repeated perimetric studies will show, in a considerable percentage of cases, homonymous field defects.

Because of the long course of the visual pathway, from the calcarine cortex of the occipital lobe to the retina, frequent observations of the visual fields, according to the methods of Walker, give us very important bits of evidence in the localization of brain tumors. There are the lesions of the occipital lobe represented by the homonymous hemianopsia, the lesions of the temporal lobe represented by homonymous defects in the upper or lower quadrant (according to whether the ventral or the dorsolateral bundles are encroached upon by the growth), the typical bitemporal hemianopsia of lesions of the chiasm or a varied picture as of a lesion involving one or both optic tracts posterior to the chiasm. The importance of careful repeated studies of the fields may be illustrated in the clinical record of this case.

W. R., aged 28 years, was referred to my service as a brain tumor case. Our first examination revealed, in addition to a marked choking of discs, a general contraction of the fields due to a beginning optic atrophy. The patient was so dull and lethargic that careful perimetric studies were out of the question. After a subtemporal decompression he was transformed from a bedridden to an ambulant case with relief of headache and subsidence of his papilloedema. Subsequent examination revealed a homonymous hemianopsia and because of this and other findings, the tumor at first was localized in the occipital lobe. Later, however, there developed on the other side quadrant defects; these could not be ascribed to an occipital lobe lesion, but could be explained only on the basis of a lesion of the optic tract behind the chiasm. This proved to be the correct interpretation of the visual findings. In this particular case the field defects were not due to the direct pressure of the tumor upon the optic tracts but to the pressure upon the tracts of the internal carotid artery and the middle cerebral artery. The tumor was posterior to the chiasm and as it increased in size the pressure of the arteries caused marked grooving or pressure defects of the tracts, one tract being almost completely bisected. This mechanical effect of arterial pressure upon the tracts, though perhaps infrequent, must be taken into consideration in lesions of this neighborhood, and when associated with evidences of dyspituitarism, point rather to an extrasellar, post chiasmal lesion than to a primary intrasellar growth.

Studies of the topography of the ventricles by roentgenogram after air injection, as proposed

by Dandy, is among the more recent contributions to localization of tumors. While in certain cases it may give contributory evidence, the possibilities of error of interpretation are such that the evidence should be used only as confirmatory of the neurological findings. The ventriculogram may show collapse of an anterior or posterior horn of one ventricle, complete obliteration of one lateral or of the third ventricle, or displacement of both ventricles to the right or left. These are all positive findings that may have significance, but unfortunately the ventricles are deep seated and tumors that originate in or adjacent to the ventricles are usually infiltrating gliomata, that belong to the inoperable group, so that the findings of the ventriculogram will prove, I fear, often of little practical value. The localization of deep-seated growths is one thing; their removal, without unwarranted mutilation or sacrifice of brain tissue and function, another. To convert a patient into a vegetative subject with a brief expectation of life, even though the tumor be removed, may hardly be called a surgical triumph. After all, we, as neurological surgeons, must recognize our limitations in dealing with brain lesions and while the ventriculogram frequently may prove disappointing as of practical moment, we should continue to employ it in selected cases at least until we can evaluate its usefulness in the localization of what may be judiciously considered operable growths.

Ignorant as we still are of the etiology of trigeminal neuralgia, we are masters of the situation insofar as treatment is concerned. Like the herniorrhaphies of the general surgical clinic, operations for trigeminal neuralgia are the commonplaces of the neurosurgical clinic. With the mortality reduced almost to zero, my records show a series of 142 consecutive operations without a fatality, and in the last 234 cases, only one. The operation from the standpoint of cosmetic effect and relief of symptoms is so eminently satisfactory that there is no need of discussion or criticism. We should turn our attention to the investigation of the etiology of the major neuralgias about which we know nothing and to a better understanding of the causes of the atypical neuralgias, so varied in their expressions, so difficult of interpretation as to their origin, and so baffling as to treatment.

The surgery of the pituitary body, or the hypophysis, is one of the later ventures of intracranial surgery and I wish to present to you as briefly as I can my present attitude toward this problem; I say present attitude because we are still in the formulative stage and what may be a viewpoint today may be modified tomorrow. Withal, certain principles, as a result of frequent observation and many operations, are pretty definitely established.

The perplexities which confront the surgeon in his decision as to operation or as to the method of operation, are many and not the least of these is the absence of uniformity in the physical findings of pituitary disorder, especially in the diversity of the visual disturbances. It must be assumed in the first place that the surgeon's responsibility begins only when there is a pituitary tumor, which by pressure on chiasm or optic tract, threatens the patient's vision, and I may say by way of parenthesis, as emphasizing needless delay, that over 50 percent of my patients have, at the first examination, been found already totally blind in one eye. The structural changes of glandular origin either of the acromegalic or dystrophic type are not to be considered as among the indications for operative attack.

In our approach to the pituitary we must elect either the transphenoidal operation or the intracranial transfrontal approach. Taking for example a specific case: This patient, middle aged, has for several years noticed that the vision of one-half the field of the right eye was obscured. The precise nature of the lesion, not appreciated, she drifted on and little by little the vision of the eye was impaired and then totally lost. In course of time vision of the left eye became impaired and she began to have paroxysmal headaches. She then became alarmed and found her way to the neurosurgical clinic. An examination revealed total atrophy of the right optic nerve, beginning atrophy of the left, an hemianopsia, a decidedly excavated sella, and a low metabolic rate. Under these circumstances, I invariably perform a transphenoidal operation, remove the floor of the sella turcica, evacuate the contents partially with forceps and curette and before the patient is discharged, prescribe a course of radium therapy to be repeated at intervals of six months. That is a perfectly simple problem, and should admit of no dispute. The risks of this operation are almost negligible; I have had no fatalities since 1919, and the freedom from operative risks is, after all, the most important factor when considering the choice of operation.

To cite another case, take for example this boy, 17 years of age, dwarfed in growth, with partial optic atrophy, an enormous sella with disappearance of posterior clinoid processes. The x-ray showed in outline a suprasellar calcified tumor, as large as a hen's egg. The approach to this tumor was made, naturally, by a transfrontal exposure. The tumor proved to be a large cyst with a thick calcified wall. The cyst wall was partially excised, its contents evacuated, returning vision improved and with it the somnolence and headache. In other words, when there is evidence of an extensive intracranial lesion, the indications as to method of approach are equally clear. But there are many

cases where the symptoms are difficult of interpretation as to whether the lesion is wholly within the confines of the sella or largely extra-sella, as in tumors of the pouch of Rathke or of the hypophyseal duct, and in doubtful cases the first attack should be transphenoidal, with the realization that should there be recurrence or should evidence develop later pointing more clearly to a suprasellar growth, a second attack may be made by the intracranial route.

The evaluation of the surgical methods of treating pituitary tumors must be based on two factors, the operative risk and the period of relief. Since radical extirpation of the sella contents is not feasible, recurrence of visual disturbances must be reckoned with. And it is for this reason that as part of our routine technic radium therapy is prescribed as an essential phase of the treatment. The influence of radium upon pituitary adenomata has been established. From my own experience I could cite an example of the subsidence of recurring symptoms after operation under radium therapy as well as an example of the enlargement of the visual fields under radium therapy alone. Because of the effect of pituitary lesions in distorting the visual fields, these lesions afford an excellent opportunity to observe the effect of whatever plan of treatment one may elect. Within the year I have had under observation a young lady with the incipient signs of pituitary disorder. There was as yet no expansion of the sella, but the cut in the fields was more than suggestive and after a course of three treatments there has been such a decided enlargement of the fields that the necessity for operation has, for the time being, been averted.

In conclusion, if we may judge from the stride of the past decade, greater achievements in neurological surgery may be anticipated in the future. Of this there can be little doubt. And while in part these achievements will be the product of refinements and contributions to technic, they will, I believe, in larger measure be the result of greater accuracy in diagnosis and in localization. The surgeon enjoys an unusual opportunity and should recognize this obligation in the course of his operative experience, to make substantial contributions to the localization of brain lesions. Just as much that we learned of the perverted physiology of the thyroid gland has been derived from the results of surgical intervention, so with the perverted physiology of the brain and the hypophysis, the surgeon is offered a large and fertile field for constructive contributions.

ENDOCRINOLOGY IN ITS MEDICAL ASPECTS*

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Clinical endocrinology is the medical application of the science of internal secretions and the glands which produce them. It is not too much to say that these internal secretions completely dominate growth, determining the dimensions and architecture of the body and each of its component parts, regulate the speed of the life processes and are essential to every function of every organ and tissue of the animal body. Furthermore, as will be shown later, the complete loss of function of any one of several of these endocrine glands is uniformly fatal, often within a few days, while any great increase or decrease in functional activity may cause slight or severe disturbance of health or structure, or both.

The potency of some of these secretions is almost unbelievable. For instance, it has been shown that epinephrin will have a perceptible effect upon smooth muscle fibres in dilutions of about one to a billion, or one grain of the substance to fifty tons of fluid (Hoskins). It is not difficult to understand that a very profound influence would be produced upon nutrition and the function of the body organs by the continuous introduction into the circulation of even extremely minute quantities of such substances as this on the one hand or their withdrawal on the other.

The quantity of these secretions furnished under physiologic conditions is astonishingly small: e. g., there is secreted 0.0002 of a milligram of epinephrin per kilogram of body weight per minute. This would be equivalent in an individual weighing 70 kilograms, or 150 pounds, to about 20 milligrams or about 0.3 of a grain per day.¹

Within a very few years this subject has assumed vast clinical importance. In attempting to review my own experience and the literature of the subject with the view of correlating the facts into a related and harmonious whole I am reminded of a remark attributed to Ralph Waldo Emerson. When asked by one of his admirers why he did not write a system of philosophy he is said to have replied that the world was still some centuries too young for such a task. While I hope that this is not literally true of the subject in hand, its consummation is without doubt somewhat distantly removed.

Let us make a rapid survey of the component elements of the endocrin system. There are

(*) First paper of symposium on Endocrinology presented before the Indiana State Medical Association at the Muncie session, September, 1922.

(1) Hoskins, *Endocrinology and Metabolism*, Vol. I, P. 17.

several of these endocrin organs about the function of which there is no question, while there are a number of others about which there is doubt.

The following is a list of the endocrin organs, actual and possibly spurious:

1. The thyroid gland,
2. The parathyroid gland,
3. The pituitary gland,
4. The suprarenals,
5. The ovaries,
6. The testes,
7. The pineal gland,
8. The stomach,
9. The duodenum,
10. The liver,
11. The pancreas,
12. The thymus,
13. The prostate,
14. The placenta,
15. The mammary glands.
16. The carotid gland, and certain other collections of chromaphin tissue which are accessory to the medulla of the suprarenals.

It is obviously impossible, within the scope of a society paper, to discuss with any degree of completeness the many glandular organs above listed. Such a task would require several volumes. It occurred to me that I might compress the best general view of the subject into the smallest space by selecting some salient characteristic phenomena of a few of the most important endocrin glands and dwell upon these and their possible relationship to other endocrin organs, in the hope that I might touch the high points, so to speak, of the general subject.

The thyroid easily occupies the center of clinical attention in the field of endocrinology. Its study has been facilitated by its very large incidence in all civilized countries and its easy accessibility for the purpose of study. Its importance in the animal economy is recognized by everyone. The literature of this gland alone is enormous and in a rapid survey such as the present only a few facts can be considered for the purpose of presenting a general viewpoint in connection with the other endocrin organs.

Its most conspicuous and probably its most important function is the regulation of the activities of the metabolic processes of the body. These activities are dependent upon and indicated by the quantity of oxygen utilized as they are essentially processes of oxidation.

The identification and isolation and chemical study of thyroxin, the active hormone, or perhaps it will be safer to say one of the active hormones of the thyroid gland, by Kendal, marks an epoch in the history of endocrin disease. Within very wide limits the oxidation processes of the body are dependent upon the quantity of thyroxin which the tissue cells contain. These general facts of course, with the exception of those relating to thyroxin, have

been fully recognized for a number of years but owing to the difficulty attending their clinical determination they were not available outside of well-equipped hospitals or institutions. The presentation to the medical profession by J. F. Benedict of his portable metabolism apparatus furnished the opportunity for the general utilization of these diagnostic data.

It is customary to estimate the oxygen requirement on the basis of a definite quantity of oxygen absorbed per unit of surface measurement of the body in a unit of time. While any other standard could be used this is done in clinical study, as well as scientific investigations, by taking as a standard the normal requirements per square meter of body surface per hour of time and for healthy adult males this has been found to be the equivalent of about 38 calories of heat; the abnormal variations above and below this standard are calculated and recorded in percentages of increase and decrease.

This subject was presented by the writer in its clinical aspects before the medical section of the American Medical Association in June, 1919; this being the first time that the subject had ever been presented before this organization in its clinical aspects. Since this time its clinical application has become little less than universal.

As thyroid secretion increases, metabolism goes up with it, increasing above the normal 25, 50 or 100 percent or even more. With insufficiency of thyroid secretion the oxidation processes gradually drop to 40 percent below the normal average, at which point, presumably without any thyroxin, they remain stationary, indicating that there are other factors which control the rate of oxidation below this level. It would be difficult to over-estimate the tremendous importance of such a variation of the fundamental chemical processes of life and for all practical purposes, with very minor exceptions, this is due entirely to the secretion of the thyroid gland. While other endocrin glands, for instance the suprarenals, have a slight influence upon metabolism, it may be safely assumed that these larger variations, in the absence of fever, indicate, with scarcely a single exception, thyroid pathology. This is one of the most important advances made in scientifically accurate diagnosis in the history of medicine.

It must not be supposed that this is the only function of the internal secretion of the thyroid gland. Indeed the consequences of moderate excess or deficiency carried out through long periods, or perhaps the life of the individual, leads to the most striking deviations from the normal architectural and other characteristics of the human body. We will look in vain, I think, for any more startling variations from the normal than those presented by the cretin on the one hand and certain types of hyperthyroidism on the other but aside from these extreme types there are many others which show

the profound influence of thyroid function in many ways. For instance, with somewhat subnormal thyroid secretion there is a tendency to retardation of bone growth with thick or even deformed bones, together with rather thick, rough, dry character of the skin, in fact the early phase of myxedema. With prolonged states of overfunction during the period of development the bone structures become delicate, with long, slender fingers, increased mobility of joints; thin, transparent, moist skin, with occasionally mottled erythema of neck and chest.

Among the important aspects of thyroid pathology may be mentioned its well-known function of combating infections by hyperplastic processes, undoubtedly associated with increased thyroid secretion. This is especially important in view of the relationship which is becoming more and more recognized of certain hitherto little understood types of low-grade sub-infection; most commonly perhaps water borne, though not essentially so.

It is difficult at present to reconcile the endemic incidence of goitre with an exclusive theory of infectious etiology. However, Dr. Wilson of Rochester, Minnesota, has apparently reached the general conclusion very definitely that the usual cause of goitre is a slow, chronic infection of this type, being in full agreement in this regard with McCarrison, Sajous, and others. In fact, I have said enough I think to show that the problems of thyroid pathology are among the most pressing and difficult of the entire field of preventive medicine.

A general study of the endemic foci of goitre seems to line up very plausibly with wide-spread infections. For instance the crowded population of Switzerland, with the intensified fertilization of the soil, offers very plausible opportunity for contamination of food products. On the other hand it would be difficult to explain the goitre zone of the Great Lakes region on this theory alone. A most remarkable phenomenon is the one reported by Hubner in which 16,000 individuals with goitre lost their goitres on immigration from Algiers to Prussia. An adequate study of differences in the sanitary conditions of these two countries might furnish the explanation.

In this connection I wish to refer briefly to the general etiology of the endocrinopathies and offer what seems to me the very plausible suggestion that the low grade infection theory might apply quite as well to the other endocrin glands. I would, however, make the important reservation that there are, without much doubt, other auxiliary or predisposing causes which may be sought for principally in the domains of heredity and environment.

It seems probable, if these infectious theories are substantiated, as they apparently are, that the time is not far distant when a large incidence of goitre will be as much of a sociologic

disgrace as typhoid fever is now. The prevention of goitre should be our aim. In its early stages probably every case is amenable to medical treatment, and Sajous says that with early recognition and adequate treatment thyroidectomy will become a thing of the past. Whether or not this roseate prophecy will ever be fulfilled remains to be seen.

For the present the syndromes of cretinism and hyperthyroidism, with or without the other stigmata of Graves' disease, the nervousness, tremor, mild tachycardia, etc., are with us. Some of these syndromes may be directly due to infections without the aid of hyperthyroidism but with basal metabolism tests available we do not need longer to be in doubt on this problem.

I have said nothing of thyroid-therapy, nor can I take time to say more than that in the treatment of myxedema and allied conditions it offers one of the most brilliant chapters of organo-therapy. One cannot help wondering whether such interesting facts as the variation in the average weight of the thyroid, which varies so greatly in different countries and nationalities, may not be associated with socio-logic and environmental conditions as yet illly understood, or not understood at all. For instance, the average weight of the thyroid in the United States is said to be 22 grammes; in Germany, 30 to 60; England, 30 to 40; France, 22 to 24. If the Germans have more thyroid than their Gaelic neighbors, it is quite worth while to ask the question, Why? And the answer may be indicated in the views just outlined.

I have already alluded to some of the remarkable property of the best-known, and indeed only known, hormone of the suprarenal gland and we will use this endocrin gland as a further illustration of the methods of procedure, experimentally and clinically, which have led up to the present state of our knowledge. This little gland, of such remarkable potentiality, weighs five grammes and one gland is placed upon the superior pole of each kidney. Its importance physiologically and clinically is very great. It furnishes at least one important hormone, epinephrin, which has already been referred to. At this point it might be well to call attention to the fact that any one active principal which has been isolated from any one gland may or may not be the only one. It is much more likely perhaps not to be the only one. In the case of the suprarens we find an organ composed of two distinct parts or structures; a central portion or medulla and an outer layer of cortical substance. The medullary portion is composed of what is called chromafin tissue and it is this part of the gland alone which forms epinephrin. The entire structure of the medullary portion of the gland can be destroyed without fatal results while the destruction of the entire gland, or the cortical substance alone is always fatal. It

would not do to conclude from these facts that epinephrin is not essential in the animal economy because chromafin tissue which always secretes epinephrin is found in smaller collections elsewhere in the body. It has been estimated in fact that there is more chromafin tissue outside of the suprarenal medulla than inside of it. This proportion might vary in different animals and individuals and it is very probable that the destruction of the suprarenal gland would not include one-half of the total epinephrin producing tissue.

In spite of the fact that destruction of the cortical portion of the gland is uniformly fatal, no active hormone has been isolated from it, yet it is perfectly certain from the fatal results of its extirpation that some such extremely important biochemical body must exist.

In the earlier work upon the experimental extirpation of the suprarenal it was thought by some that the fatal results were due to the coincidental traumatism unavoidably produced in the operative procedure. This question was definitely settled by Biedls, who dissected the glands from their normal position, leaving them attached by pedicle of blood vessels, etc., and transplanted them in subcutaneous position. When they had fully recovered the glands were removed by a very simple operation with the usual fatal result.

There seems to be satisfactory evidence to prove that the medullary and cortical portions of these glands are really separate organs. The embryologic derivation of the suprarenal medulla is ectodermal, or the same as the derivation of the skin and nervous system, while the cortex has a meso blastic origin corresponding with the origin of the parenchymatous organs which confirms their anatomical physiologic independence, and some investigators think that the chromafin tissue of the medullary portion of the gland is accidentally included in the cortical portion by an enfolding process just as other collections of chromafin tissue might have been included. These facts are of more than speculative interest, showing in the first place the sharp limitations of our knowledge and proving the existence of important chemical bodies of which at present we know nothing.

The most conspicuous phenomenon in the partial or complete destruction of the suprarenal gland is weakness of the skeletal and cardiac muscles.

There are, of course, many other symptoms associated with this one. According to Cohoe* there are five different clinical syndromes produced by disturbance of the suprarenal gland:

- 1 (and most conspicuous) Addison's disease,
- 2 Hypo-adrenia,
- 3 Pseudo-hermaphroditism,
- 4 Pubertas-precox,
- 5 Virilismus.

It is obviously impossible to make even the briefest discussion of these syndromes. It has now been about three-quarters of a century since Addison's disease was first described and many points are still in controversy. Asthenia and pigmentation of the skin are the most striking characteristics. That it is related to the suprarenals is well established but just what part of the gland and what sort of pathology is essential are still matters of dispute. It seems certain that the cortex has more to do with it than the medulla.

In 70 percent of a considerable group of cases adrenal tuberculosis was present. In another considerable proportion simple atrophy existed. Next to the muscular weakness the pigmentation or melanoderma is the most consistent symptom but is not quite universal. It should be emphasized that patients may die of Addison's disease without the pigmentation. This is very liable to occur in the fulminant cases. I can recall several patients in my own clinical experience which I believe now may have been Addison's disease without pigmentation. Extreme and rapidly progressing weakness with very marked arterial hypotension with a systolic blood pressure sometimes reaching a point below 50 should create a strong suspicion of Addison's disease with absent or belated pigmentation.

If hypo-adrenia, which is very apt to be rapidly fatal, is to be recognized as a definite syndrome, the distinction between this and the early stages of Addison's disease without pigmentation would seem to be almost, if not altogether, clinically impossible.

The other suprarenal syndromes must be passed with mere mention. Those wishing to follow up the subject are referred to the excellent monographs of Cohoe, Quinby and Jump*.

The pituitary gland is essential to life; its removal being uniformly fatal. When removed from its bed in the turkish saddle one is astonished at its diminutive size. We place it on the scales and find that it weighs about 10 grains or 0.65 of a gramme.

The more one looks at this minute fragment of gland tissue the greater the astonishment becomes that it can possibly do what we know it does.

As with most of the endocrin glands the clinical phenomena may be divided into three groups, viz., hyper-function, hypo-function and dysfunction.

The results of hyper-function vary according to whether they occur congenitally or later in life. If it is the former the active principles of the anterior lobe stimulate continuous overgrowth, more or less symmetrical in type, and gigantism results; if it occurs later as an acquired pathology the result is acromegaly. In this disease we note, as the most conspicuous

features, the peculiar deformities of bony growth—angular facies, enlargement of the mandible, enlarged hands and feet, etc. The individual is marked as the victim of a peculiar pathology. The results of deficient pituitary secretion are scarcely less conspicuous. The most notable is dystrophia adiposo genitalis, which is the equivalent in pituitary pathology of myxedema and cretinism in thyroid pathology. The typical cases are very characteristic and among the most obvious thing in these cases is the excessive obesity, largely distributed around the lower abdominal zone and hips. Closer examination reveals a more or less complete absence of pubic hair and infantile type of the genitalia. This syndrome is due to deficiency of the pituitary secretion.

Another syndrome is the well recognized type designated as dwarfism, which we know is also one of the results of early pituitary deficiency.

Still another is infantilism, characterized by arrested development, temporary or permanent in certain structures of the body. For instance, the persistent foramen ovale, cleft palate, extremely dwarfed stature, etc.

Still another type is the cachexia hypophyseipriva with the very characteristic train of symptoms following the complete destruction of the pituitary gland. These symptoms are tremors, fibrillary twitchings, diminution in pulse and respiratory rate, fall in temperature, com and death. These symptoms and the fatal result will not appear if a small functioning portion of the anterior lobe remains. They can also be prevented by the intra-cerebral transplantation of a small segment of the anterior lobe of a healthy pituitary gland, also by the subcutaneous injection of infusions of the same part of the gland.

Now these characteristic syndromes which I have briefly indicated, resulting from excess, deficiency or complete absence of the pituitary secretions, do not always exist in a pure, unmixed form. For instance, we may have a combination of gigantism with acromegaly, which I think might be explained by congenital hyperpituitarism, and later, perhaps, after an intermission of the hyper-pituitary state, or without an intermission, an acute exacerbation of the hyper-pituitarism, superadding the acromegalic syndrome to that of gigantism. Gigantism is probably always congenital and acromegaly always acquired.

It seems as though it should be possible with a thorough knowledge of the endocrin symptoms to recognize sometimes the early stages of acromegaly before the bony deformities have developed. There is clearly a period between the initial symptoms and the beginning of the characteristic deformities of acromegaly during which the permanent stigmata of the disease, if recognized, could be at least foretold and an

opportunity given, if possible, to limit the duration of the hyper-pituitarism and possibly prevent the subsequent deformities. The diagnostic data of beginning acromegaly are first, severe persistent pituitary headache with lowered sugar tolerance, and tendency to glycosuria. These two symptoms should create a suspicion of beginning acromegaly which if the diagnosis is to be of practical value to the patient should be recognized before the secondary sexual characteristics, which develop a little later and which are the prelude to the bony deformities, have manifested themselves.

Again acromegaly has been found associated with exophthalmic goitre. Another group of cases presents the symptom complex, for instance, of either gigantism or acromegaly, together with the stigmata of infantilism. Such cases as these may well be called dispituitarism and offer excellent material for pathological speculation. For instance, has the syndrome of infantilism been stamped upon the individual by an early hypo-pituitarism and later the glandular activities becoming excessive and producing either gigantism or acromegaly, according to whether the change occurs congenitally or post-natally?

The whole subject of glandular dysfunction is very perplexing and appears to me to rest upon one of two hypotheses:

First: The existence of one or more unidentified hormones, along with perhaps one that is fairly well understood and fully recognized, thus giving rise to various groupings of symptoms.

Second: An alternation of functional activity such as that above indicated by the co-existence of the syndrome of hypo and hyper-function; such conditions are actually indicated by what we now know of thyroid and pituitary pathology.

With regard to the active hormones of the pituitary gland we know very little about them. Only one definite chemical compound has been isolated, viz., tethilin, from the anterior lobe. It will be remembered that the complete removal of the anterior lobe is uniformly fatal and produces characteristic syndrome of cachexia hypophyseipriva. On the other hand the posterior lobe apparently contains the active principles which have been classified as pressor, depressor and oxytocic. It has been conjectured that these unidentified hormones of the posterior lobe are derived by a splitting up process from the tethilin of the anterior lobe which is probably the particular hormone concerned when excessive in the production of the syndromes of overgrowth and when deficient of the syndromes of subnormal or arrested development.

Some of the most brilliant achievements of organo-therapy have been in cases for instance of the syndromes of hypo-function by intra-cerebral transplantation of the pituitary or subcutaneous injections of infusions of this gland.

In one of Cushing's cases subcutaneous injections were first used, producing great improvement which was later made permanent by the intra-cerebral transplantation of the pituitary gland of a newly-born, healthy infant accidentally dying at birth.

Time will not permit the discussion of the parathyroids with their syndrome of tetany and disturbances of calcium metabolism, etc.

Of the remaining eleven glands in the list of endocrin organs, the ovaries, the testes, the stomach and duodenum, the liver, the pancreas, the placenta and the mammary glands undoubtedly produce internal secretions of greater or less importance. An endocrin function of the pineal gland, the thymus and the prostate has not yet been satisfactorily established and space will not permit any discussion whatever.

Now what is the meaning of the entire subject of endocrinology to the general diagnostician and therapist? It is, I think, perfectly obvious that there is a large group of cases which can be differentiated only by utilizing all the facts concerning endocrinology and availing ourselves of the special diagnostic methods which have been developed within the last few years, and especially basal metabolism and carbohydrate tolerance. Many cases of endocrin disease have a perfectly normal basal metabolism. It is fully established that epinephrin causes definite but transient increase of basal metabolism. It bears no comparison with that produced by thyroxin and lasts only a very brief time. It is especially in alterations of the heart rate and certain types of nervousness in which the basal metabolism is almost decisive either for or against disturbances of thyroid as the probable causal factor. An increase or decrease in carbohydrate tolerance of a given case has an important bearing on the diagnostic questions. Frequently the presence or absence of one or two symptoms will point toward the existence of hyper-function on the one hand or hypo-function or dysfunction on the other. It has frequently happened in my experience that the existence of endocrin disease and syphilis or tuberculosis as the principal factor in the causation of a given syndrome could be decided in this way.

After all what about therapeutics which is the goal of all clinical study? The value of these methods in differential diagnosis indicates the answer to this question in part.

Organo-therapy, which is commanding so much attention at the present, is far from being the only therapeutic deduction derived from a positive diagnosis of endocrin disease. In fact, I feel called upon to express a warning, if not a protest against the indiscriminate exploitation of organic products by commercial interests. A prominent writer along these lines, referring to the well-known facts concerning promiscuous use of these products, characterizes it as one of

the worst forms of quackery and quotes the preposterous opinion that a number of endocrin products can be given and that nature will select the ones most needed. Such a total lack of the scientific spirit and careful consideration of all the facts is humiliating to say the least. In therapeutics, as well as in diagnosis, the endocrin glands have come to the front to stay but the number of these products that have a proven scientific basis is as yet very small and their use requires the most painstaking discrimination in order that the patient may not suffer from commercial vendors on the one hand and unscientific medical practice on the other.

THE NEUROLOGICAL PHASE OF ENDOCRINOLOGY*

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For practical purposes the human nervous system may be divided into three levels of activity, the vegetative, the sensorimotor and the psychic.

For a long time it has been asserted that the nervous system is the means by which all of the several parts of the human unit are integrated by a species of complicated adjustment to given ends. It can be perceived how this integration is actually brought to pass by means of the vegetative nervous system and the chemical regulators of metabolism at a physico-chemical level, and how by the successive compounding of reflexes at the sensorimotor level the human unit is further integrated, so that as a whole work more consistently toward broadly defined goals, the integration manifesting itself at successively higher and higher levels in the history of the individual and the species.

Viewed in this way the individual is seen struggling along the path of evolution in constant conflict between an inherent inertia that would keep it at a given level, but gradually advancing by a series of give and take compromises that finally bring it to a better adjustment with its environment at ever higher levels of integration.

This integrative action of the nervous system is illustrated in the simple reflex with its innervation of agonists on the one hand and antagonists on the other, and the channeling of final common pathways for nervous discharge.

This law of conflicting tendencies, pathways of opposites-ambivalence, where the final issue for higher integrations is made possible at the sensorimotor level by the tension of reciprocal innervations, is found also to be the rule in the vegetative nervous system, with its double set of pharmaco-dynamically demonstrated opposed elements, mediated at least in part by

(*) Second paper of symposium on Endocrinology presented before the Indiana State Medical Association at the Muncie session, September, 1922.

equally opposed, exciting and inhibiting chemical substances secreted by the endocrinous glands—the hormones.

Finally an analogous ambivalent mechanism is seen working at the highest, the most complex level, the psychic, which determines conduct with the assistance of the phenomena called consciousness, in which a psychological symbolism is found replacing sensory and motor neurons, and exciting and inhibiting hormones.

The biological activities which maintain life at the lowest level are physical and chemical, and thus that portion of the nervous system which has direct controlling influences over these activities is properly designated as the vegetative nervous system, and that part of neurology which has to do with a consideration of these physico-chemical systems, because it deals with the nervous control of the viscera and of metabolism, is properly designated as visceral or vegetative neurology.

In this region of vegetative neurology a rich variety of disturbances is found, involving the glandular, gastro-intestinal, genito-urinary, vascular, respiratory, muscular, cutaneous, and bony systems. In addition, there are certain complex groups involving, for the most part, the glands of internal secretion, the endocrinopathies.

From the foregoing we see how the three levels of the nervous system are interdependent one upon the other. Inasmuch as the physico-chemical substances secreted by the endocrine glands have their direct action upon the vegetative nervous system and, vice versa, the influence of the vegetative nervous system upon the glands of internal secretion, we will consider this relationship more minutely and endeavor to show the effect upon the other levels, and the individual's various physiological, neurological and psychological reactions.

Stimulation of the glands of internal secretion takes place through the vegetative nerves, and the hormones produced by the glands in turn stimulate vegetative nerve structures. Thus, the sympathetic nervous system, the endocrine glands and the gonads form a basic tripod, entrusted with the duty both of the preservation of the individual and the continuity of the species. Their relationship is shown in disease as well as in health, and is reflected in many of the neuroses and psychoses.

The importance of these two subjects can be appreciated fully only when the fact is grasped that every normal action expressed in the unstriated musculature of the body, the heart, and the secreting glands, must be brought about in response to stimulation by the chemical substances secreted by the glands of internal secretion or by the vegetative nerves. There cannot be a single sensory or psychical impression which does not, at least theoretically, affect the

vegetative nerves and endocrine glands. Further, if the impressions are strong, they upset the equilibrium in the endocrine and vegetative systems and produce symptoms of disease. Many symptoms which manifest themselves in the so-called vegetative structures (smooth musculature, heart, and secreting glands) are due to disturbances in the normal physiologic equilibrium of these two systems.

Not only are both the endocrine and vegetative systems subject to impulses of a physical nature, but each system is influenced by psychical impulses and by impulses which originate in the other system. It is now our purpose to inquire into this relationship and show, as far as we are able, how the vegetative nerves influence the endocrine glands and how the chemical substances produced by these glands influence the visceral nerves.

The autonomic or vegetative nervous system consists of two divisions, the sympathetic and parasympathetic. The sympathetic division is sometimes called the thoracolumbar outflow, because it takes its origin in the cord from the thoracic and upper four lumbar segments. The parasympathetic division, on the other hand, is called the craniosacral outflow, because the nerves composing it arise from the brain and the sacral portion of the spinal cord. The parasympathetic division is also sometimes called the "autonomic" or "vagus system" since the vagus nerve is the chief one of that system. Certain of the body structures are innervated wholly by one division of the autonomic system and others by the other; again, structures are activated by one division and inhibited by the other. There are certain centers in the brain for the regulation of many important functions presided over by the vegetative system. These centers may be looked upon as being receiving and dispatching stations, through which integration of action is maintained. There is a sympathetic center in the brain which Karplus and Kriedl have described as lying near the tuber cinereum. It is significant that these sympathetic centers lie in the same area as those which control such functions as thermogenesis, polyuria, and vasomotor changes.

Stimuli which act upon the sympathetic system may either act on the sympathetic centers in the brain and cord, or on the true sympathetic motor cells in the peripheral ganglia. Some evidence has been published by Camus and Roussey which would indicate that the polyuria depending on hypophyseal disease might be due to local irritation of these centers, as will be mentioned later.

The pilomotor muscles, the sweat glands, the blood vessels, fallopian tubes, body of the uterus, vas deferens, seminal vesicles, and ureter, also the suprarenal and thyroid glands and the anterior lobe of the pituitary body are wholly, or almost wholly, supplied by fibers from the

sympathetic system, both activation and inhibition of action being accomplished through neurons belonging to the same system.

There are certain structures which are believed to be supplied by the parasympathetics, such as the ciliary muscle, esophagus, and cardiac end of the stomach.

The following structures are activated by the parasympathetics and inhibited by the sympathetics:

1. The gastro-intestinal tract, both musculature and secreting glands, excepting the esophagus, cardiac end of the stomach, and sphincters.

2. Those structures derived embryologically from the gastro-intestinal tract, both musculature and secreting glands, such as: (a) the respiratory tract, (b) liver and gall bladder, (c) pancreas, (d) the body of the bladder and the muscles around the prostate gland.

3. Certain structures about the head: (a) the pupillary muscle, (b) the lacrimal glands, (c) salivary glands, (d) the gland and smooth musculature of the nose, sinuses, mouth and pharynx.

The following structures are activated by the sympathetics and inhibited by the parasympathetics: (1) The sphincters of the gut and bladder, (2) the trigone of the bladder, (3) the urethra.

The necessity for students of endocrinology being familiar with the vegetative nerves and the action of each division upon the various tissues is evident from the fact that some internal secretions act upon one division, others upon the other, and some apparently upon both; and since many of the symptoms which result from altered secretions of the endocrine glands depend upon the manner in which they affect the vegetative nerves, it is absolutely essential for clinicians to bear in mind that symptoms on the part of the vegetative structures must necessarily differ according to the sensitiveness of the various nerve cells to stimuli.

The medical profession is indebted to Eppinger and Hess for a valuable contribution to clinical vegetative neurology in their conception of "vagotonia" and "sympathicotonia". These clinicians have shown that by the physiologic difference in action of the sympathetic and parasympathetic neurons of the vegetative system there may be recognized two definite clinical groups, "sympathicotonic" and "vagotonic," which are met constantly in practice. In certain groups of men symptoms of predominant sympathetic stimulation exist, and in others predominant parasympathetic stimulations. These different characteristics depend upon the fact that the two divisions of the vegetative systems are antagonistic in action in structures which are supplied by both, and further, that each supplies certain structures alone. If the sympathetic nerve cells are hyperirritable, sympathetic

action predominates in the individual; if the parasympathetic nerve cells are hyperirritable, parasympathetic action predominates. Those patients belonging to the former group are called "sympathicotonic", those to the latter, "vagotonic".

Sympathetic hyperirritability (sympathicotonia) is manifested in some of the following symptoms: Dilatation of the pupil; protrusion of the eyeball; lessened lacrimal secretion; lessened salivary secretion; lessened mucous secretion in the nose and throat; lessened secretion in the gastro-intestinal tract, showing particularly as hypochlorhydria and retarded digestion; lessened motility in the gastro-intestinal tract, showing a slowness in emptying the stomach; contraction of sphincters of the gut, and a general relaxation of the intestinal musculature leading to the common type of constipation found in the acute infectious diseases; rapid pulse and at times rise of blood pressure, although vasoconstriction in one area is usually accompanied by compensatory vasodilation in others; increase in body temperature due to vasoconstriction in the superficial vessels which interferes with the elimination of heat; and an increased production of heat resulting from the increased metabolic action; diminution in the amount of urine; alimentary glycosuria; contraction of the ureter; contraction of the uterus; goose flesh; and increased sweating. Increased suprarenal, thyroid, and pituitary secretion also follow sympathetic stimulation; and this in turn produces symptoms varying in degree according to the amount of extra secretion formed.

Parasympathetic hyperirritability (vagotonia) is accompanied by some of the following: Contraction of the pupil; widening of the eye slits; increased lacrimation; increased secretion of nasal, oral, and pharyngeal mucous glands, conditions commonly known as catarrh; increased salivary secretion; contraction of the laryngeal muscles, such as is met in laryngospasm; increased bronchial secretion, such as is met in bronchitis; spasm of the bronchial musculature, as found in asthma; hypermotility and hypersecretion of the gastric glands, including that of hydrochloric acid; hypersecretion and hypermotility of the intestine, leading to colicky pains and state of either spastic constipation and stasis or diarrhea, depending much on the degree of stimulation and on whether the circular or longitudinal muscles are predominantly the recipients of the increased stimulation; irritable bladder; and incontinence of urine and feces. Sweating is also found in conditions which are accompanied by the above group of symptoms, as well as those belonging to the sympathetic syndrome.

It must be evident to the most casual observer that the action of a given stimulus would differ according to the irritability of the nerve cells acted upon; but when we consider that internal

secretions are more or less selective in their action, affecting one division of the vegetative system at times to the exclusion of the other, it is further evident that the resultant action would differ greatly, according to whether the patient is a sympathetictonic or a vagotonic. With this conception grasped, one very important fact in explaining the variability of symptoms in the same disease in different individuals is established. Hyperirritability may be general or confined to certain structures. Symptoms will often be confined to certain structures, because the nerve cells in these structures are discharged only to a significant extent. If the exciting stimulus were stronger, the symptoms would be more widespread, involving other neurons.

There is an intimate relationship between the glands of internal secretion and the vegetative nerves. Stimulation of the sympathetic nerves, as before mentioned, increases the secretion from some of these glands, particularly the medulla of the suprarenals, the thyroid, and possibly the pituitary. Stimulation of the parasympathetics activates others. There is evidence also that the secretion from the various endocrine glands, on the other hand, activates the vegetative nervous system; some secretions, like that from the suprarenals, hypophysis, and thyroid, acting upon the sympathetics, and others such as that of the parathyroid, ovary and pancreas, acting upon the parasympathetics. The intimate relationship between the autonomic system and the endocrine organs has been especially emphasized by the Italian School. Pende (1916) has developed at length the conception of such relationship. Indeed, so close does he regard the functional connection that he consistently treats of the two as constituting for practical purposes a single mechanism. It is assumed, says von Furth, that the suprarenals, thyroid, and hypophysis, activated by the sympathetics, have an accelerating influence upon metabolism, stimulating protein destruction, carbohydrate mobilization, and likewise the metabolism of fats, while they also control the water and salt output and the galvanic irritability of nerves.

The importance of these facts is evident to the clinician who appreciates them, and affords a basis for understanding the nervous manifestations found in endocrine disorders and endocrine manifestations found in nervous disorders. One cannot conceive of any marked change taking place in the secretion of any of the important endocrine glands, either a withdrawal, as occurs in the conditions of hypofunction, or an addition, as occurs in conditions of hyperfunction, without affecting or destroying the equilibrium of the vegetative nervous system, neither can one conceive of any marked stimulation occurring in either of the divisions of the vegetative system, without affecting some

of the endocrine glands. In disturbance in the vegetative nerves, the symptoms are often expressive of a stimulation of one division only, although at times there may be symptoms belonging to both divisions. Endocrine disturbances are almost always pluriglandular. With this introduction, it can be seen that the action of the vegetative nerves and the secretions of the endocrine glands are so intimately related and correlated that they cannot be separated. Both are avenues through which action in different structures is correlated and integrated; and each in turn stimulates and receives stimulation from the other.

With the foregoing facts and theories in mind, we will endeavor to show the relations between some of the more important individual endocrine glands and the vegetative nervous system as well as the sensorimotor and psychic levels.

The secretion of the medulla of the suprarenal gland, in its relationship to the vegetative nerves, is better understood than that of any other internal secretion. This understanding has been facilitated by the determination of the close relationship which exists between the chromaphil tissue in the medulla of the suprarenal body and the cells of the sympathetic division of the vegetative nervous system, as shown by Balfour, Kohn, and Gaskell. The chromaffin cells found in the medulla of the suprarenal gland are differentiated sympathetic cells, having been derived from that portion of the central nervous system which migrated from the neural canal to form the sympathetic system. They are influenced by the same stimuli that act upon the sympathetic nerves (Elliott, 1912) and epinephrin, the resulting secretion, influences all tissues, except the sweat glands, that are acted upon by the sympathetics, and produces the same effect as though the sympathetic nerves themselves were stimulated. This fact was finally brilliantly demonstrated by Elliott in 1905, although foreshadowed by the results of several other investigators.

The action of epinephrin, as generally admitted, except in the case of the blood vessels, is not on the central nerve cells, but in the organ or structure itself at the myoneural junction (Elliott, 1905). That the action is not directly upon the cells is inferred according to Macleod from the fact that epinephrin is "incapable of acting on tissues which are devoid of sympathetic nerve fibers, and is also inactive on those tissues in the embryo which have not yet received any nerve supply." Recent experiments by Hartman (1917), however, show that the action of epinephrin in the control of the blood vessels of the body may be exerted either in the dorsal root or sympathetic ganglia, as will be discussed later.

Biedl and Dreyer have shown that stimulation of the sympathetic fibers to the suprarenal

glands causes an augmented secretion of epinephrin. From this fact the inference follows that any condition leading to generalized discharge through the sympathetic system leads to a similar effect. Several investigators, and especially Cannon and his co-workers, have adduced positive evidence that the emotions, pain, and asphyxia, all of which lead to generalized sympathetic discharge, cause an enhanced discharge of epinephrin. Stewart maintains, however, that none of the evidence so far offered is adequate to determine the matter. It is by such "after discharge" of epinephrin that Cannon explains the prolonged bodily reaction to emotions after all superficial evidence of the operation of the exciting cause has disappeared. Dr. Pottinger has called attention (1916, 1918) to the fact that an analysis of the syndrome of toxemia, as expressed in the peripheral tissues, shows its manifestations to be a result of general sympathetic stimulation. We are justified in assuming, therefore, that toxemia stimulates the suprarenals and causes them to produce an increased amount of secretion, which augments and prolongs the effect of the nerve stimulus; and, further, that severe or chronic infections may stimulate and exhaust the suprarenals. The question of inhibition of action in the suprarenal gland is one that has interested physiologists and clinicians for a long time. Hertofore nothing definite has been known, but Cannon (1920) as a result of recent investigation, states that stimulation of the afferent vagus fibers causes inhibition of the suprarenal medulla; while stimulation of the sensory somatic fibers results in increased suprarenal secretion. This is a very important contribution.

Loss of the suprarenal medulla induces no symptoms and no disease, according to the most reliable observations. However, loss of the suprarenal cortex causes profound prostration and death within a few days, in what appears to be acute Addison's disease. Grief, fright, or other forms of sudden emotion will produce glycosuria, due to the sympathetic effect upon the suprarenal glands. Also apoplectiform attacks resembling a cerebral hemorrhage have been reported when autopsy showed suprarenal hemorrhage. Addison's disease is characterized by slow degeneration of the suprarenal gland as a whole. The neurological symptoms are chiefly gradually developing asthenia with arterial hypotension, amyotrophy, depression, unwillingness to do anything, with occurrence of myoclonic and epileptiform convulsions, with periodic palsies, confusional states, delirium, chronic paranoid ideas, coma, death.

Hyperactivity of the adrenal glands is very rare, usually occurring in women, but may occur in men. The more common neurological symptoms are overactivity, nervous agitation, and even approaching maniac episodes. These patients are usually precocious, but again they may be imbeciles.

The thyroid gland is innervated by the cervical sympathetic, also by the autonomic. But there is evidence to show that the secretory reflexes pass by means of the sympathetic fibers and not by the cranial autonomic ones (Cannon and Cattell). (*Am. Jour. Physiol.*, 1916). The chief endocrinopathies produced by thyroid disease are those due to lessened function, and those due to an excess of function.

Hypothyroidism is due to a variety of conditions, namely: developmental defects, vascular changes, degenerative processes of the gland tissues itself and new growth, also acute infections, psychic states such as grief, anxiety and mental strain.

In hypothyroidism the central nervous system suffers severely. The brain may show defective convolution and all parts of the central, peripheral and autonomic nervous systems exhibit the signs of retarded and deficient development. Aside from the anatomical changes in the bony development which is partly due to lessened function of the pituitary, the chief mental and neurological symptoms are in certain cases imbecility, in others dullness and apathy, the child may not be able to talk until the third or fourth year, irritability, the cranial nerves may show defective development, the cerebrospinal nerves may be deficient, the motility as well as the sensibility is diminished both as a result of peripheral and central maldevelopment.

The reflexes are not markedly changed. The gait is usually wide based and clumsy and due in part to the mental dullness. There is usually defect of memory, attention is diminished, thinking goes on more slowly, but may be of fair capacity. There is usually a loss of initiative, and emotional dullness goes along with the sensory losses and motor reluctance. The speech is apt to be slow, as are other motor acts. It is monotonous and the thickened lips further contribute to make it at times unintelligible. The whole appearance of the patient is one of gradually advancing stupidity which, if there is no relief, goes on to more profound defect states as dementia. Hearing is usually defective. According to some investigators, there is a certain amount of degeneration found in the vagus and glossopharyngeal nuclei.

We may have varying grades of hyperthyroidism, ranging all the way from apparently the normal state to the extreme type, known as exophthalmic goitre. The gland is usually enlarged and elastic, the vessels dilated and new proliferating blood vessels are found. However, we may have cases of hyperfunctioning without apparent anatomical changes. We also have hyperthyroid conditions following the acute infectious diseases and acute toxic states, such as iodine poisoning. Fear, anxiety, disappointment or any other mental stress and strain are causative factors in producing hyperthyroidism as was demonstrated during the recent World War when we had an enormous amount of cases

of hyperthyroidism developed among our soldiers, thus showing the close relationship between the psychic, vegetative nervous systems, and the endocrine glands. In exophthalmic goiter we see the close relationship of the thyroid glands with the vegetative nervous system and many of the symptoms are readily seen if we have a correct understanding of our neurology. For instance, the sympathetic irritation explains the exophthalmos, tachycardia, loss of weight, and the alimentary glycosuria. Autonomic irritability causes the von Graefe, the lymphocytosis, the diarrhea, the increased secretions. The influence of the thyroids on the carbohydrate metabolism, as seen in the rapid emaciation and alimentary glycosuria, possibly acts through the pancreatic retardation or through a relative increase in adrenalin action. That the thymus is involved in the blood picture formation seems certain.

Thus one comes to a combined neurochemical theory in that exophthalmic goiter is dependent upon hyperactivity of the thyroid secretions, which increased secretions act through the visceral or vegetative nervous system. Both autonomic and sympathetic systems are thus in a state of hyperexcitability—a condition the anatomical foundations for which are found in a type of individual termed vagotonic by Eppinger.

The neurological symptoms are chiefly vegetative as seen in tachycardia, von Graefe sign, swollen eye lids, protrusion of the eye balls, retracted lids, Lowi's sign (dilation from adrenalin), irregular or stiff pupils, also loss of the accommodation reflexes. Optic nerve atrophy occasionally increased tear secretion early, with dry eyes later, also inefficiency of convergence without double vision (Mobius' sign). Usually the skin is moist, with excessive perspiration in spots is occasionally found. Vasomotor instability is frequent. Marked reddening alternates with paleness. The surface heat is usually increased. Dermographia and urticaria and goose flesh are often found, also the nails show deformities. Tremor is almost constant in varying degrees, psychical stimuli usually increases the tremor. There is a general psychomotor and emotional irritability. Moodiness and sudden changes are frequent. In marked cases distinctly manic phases may develop: again acute and deep depressions (often suicidal) take their place. Thus the picture approaches very closely at times to the type of Kraepelin's mixed manidepressives, or the more typical circular forms of this psychosis. Toxic epiphrenomena may take place with ideas of reference, or persecution, even hallucinations, principally of sight. The general picture of an acute delirium is a grave sign.

The nerve supply to the parathyroid is from the parivascular sympathetic plexus, the fibers

ending on and between the gland cells. Contrary to the rich nerve supply to the thyroid, the supply to the parathyroids is very scanty.

The relation between the thyroid gland and the parathyroids is doubtful, though some authors claim that after extirpation of the thyroid gland, the parathyroids hypertrophy, but this cannot be substantiated.

As a result of degeneration or removal of the parathyroid gland, a condition known as tetany results. Tetany is a clinical syndrome characterized by a peculiar hyperexcitability of the nervous system (motor, sensory and autonomic), and in manifest cases, also by spontaneous attacks of peculiar tonic spasms, involving certain groups of muscles, or even the whole body musculature. Tetany has as its main symptoms tonic, intermittent, bilateral, often painful cramps, which without, for the most part, any loss of consciousness, involve the muscles of the upper extremities, particularly the hand, which is held in the obstetrical position. The muscles of the lower extremities may be involved also, those of the larynx, of the face, and of the jaw, seldom those of the chest, abdomen, neck, diaphragm, or tongue. In rarer cases the eyeball muscles are implicated, as is also the bladder. In the sensory sphere paresthesiae and pains are present, while hyperesthesiae occur now and then. Pressure upon the brachial plexus may give rise to an attack: hyperexcitability to electrical currents is present (Erb), mechanical hyperexcitability of the muscles and motor nerves is observed (Chvostek), while the sensory hyperactivity to mechanical and electrical stimuli is also present (Hoffmann). The psyche is rarely uninvolved, and following operative removal there has developed extreme anxiety with the sense of impending dissolution. The hyperexcitability of the neuromuscular apparatus is primarily due to a change (chiefly a deficiency) in the amount of the calcium in the blood, which is probably the one great function of the parathyroids.

The hypophysis is a most interesting organ, from an anatomical, phylogenetic and physiological standpoint. It is divided into three main parts, the pars anterior, usually referred to as the pituitary, and is derived from the gastroenteron, and is epithelial in structure; and the pars intermedia, which is probably derived from the anterior portion and the posterior part, pars nervosa, or infundibulum, which is made up from neuroglial cells. The pars intermedia contributes its secretion to the cerebro-spinal fluid. There may be numerous accessory pituitary structures which have physiological significance, but this has never been determined. The whole gland is innervated by cervical sympathetic nerve fibers. Numerous disease syndromes are possible from diseases of the hypophysis, but the two best known from an endocrine standpoint are concerned with the anterior lobe, the

pituitary. These may be grouped under hyperpituitarism and hypopituitarism.

Acromegaly is characterized by the gradual enlargement of the bones of the nose, jaw, hands and feet and a hyperplasia of all of the bony structures due to an overactivity of the vegetative nervous system. This overexcitability of the nervous regulators of metabolism, from excessive pituitrin secretion, also induces hyperplasia of other endocrinous structures, notably the thyroids, interstitial gonad cells and the suprarenal cortex. From these contributory factors arise a medley (often contradictory) of thyroid, genital and vascular anomalies, some in the nature of hyperplasia, some of a degenerative or inhibitive character such as hairy and genital defects. The change in the pituitary itself is most frequently of an adenomatous or adenosarcomatous type, although this is not invariable. In pure adenomata of the pituitary the symptoms tend to be more clean-cut and classical. As a rule the whole hypophysis is implicated, which brings the posterior lobe (*infundibulin*) into increased or diminished activity with contradictory and mixed syndromes.

The neurological symptoms found in hyperpituitarism are most variable, due to the close connection between the activities of the pituitary gland and the other glands of internal secretion, also pressure symptoms due to the enlargement of the hypophysis. Amenorrhea is frequent in women and loss of potency in men, usually associated with atrophy of the gonads. The muscular tissues have a tendency to atrophy early in the disorder following hypertrophy.

Anomalies dependent upon thyroid alterations are frequent. These consist, for the most part, of increased sweating, tachycardia, diarrheas, exophthalmos at times, Stelwag's symptoms, irregular palperbral fissures, variations in pupillary equality, tremor, thermal alterations apparently related to the arteriosclerosis frequently seen, diabetes mellitus or glycosuria, and other signs of altered adrenalin activity. In addition to the essential metabolic disturbances, symptoms due to the nature of the producing lesions tumor, hyperplasia, neighborhood symptoms, are frequently found, but these are not invariable. Severe bitemporal headaches are frequent. This is an intracranial pressure sign. The sella turcica is usually enlarged from tumor formation, as disclosed by the x-ray examination. Pressure upon the optic nerves at the chiasma is usual, leading to various types of hemianopsia or even blindness. Distorted fields are the rule. Mental symptoms ranging from sluggishness to severe deterioration occur, but are not invariable. Epileptic attacks may occur, which may be due to intracranial pressure and not necessarily due to any abnormal secretion. Overactivity of the pituitary gland usually leads to overactivity of the other endocrine glands,

and, vice versa, feeding of extracts of the other endocrine glands, usually leads to a hyperplasia of the pituitary gland.

Hypopituitarism with its varying grades also produces a very interesting train of symptoms and syndromes. Removal of the whole gland is uniformly fatal, producing symptoms of tremor, muscular fibrillation, diminution of pulse and respiratory rate, subnormal temperature, stupor and coma (*cachexia hyperphysoprsiva acuta*). Removal of the posterior lobe does not cause death or any special symptoms. Complete removal of the anterior lobe results in death to the animals. Separation of the stalk causes death. Partial removal of the anterior lobe causes obesity. Cushing and his collaborators made the additional observation that the obesity was of the character found in the condition described as *dystrophia adiposogenitalis* since it was associated with genital atrophy; and they further observed that in young animals persistent infantilism occurred after partial removal of the anterior lobe. The same observers also noted that the subnormal temperature, which is a symptom in *dystrophia adiposogenitalis*, could be raised by an injection of an extract made from the pars anterior. This phenomenon they referred to as the "thermic reaction". The increased carbohydrate tolerance, studied by Goetsch, Cushing and Jackson, and the low blood pressure, symptoms of posterior lobe deficiency, they were able to relieve by injection of infundibulum. W. Blair Bell in some recent animal experimentation, was unable to produce the syndrome of *dystrophia adiposogenitalis* by the partial removal of the pars anterior, although it followed compression and separation of the stalk; however, in both instances the genital syndrome developed.

Manifestations of psychic disturbances may result from increased intracranial pressure, especially from a growth involving the temporal and frontal lobes, and from insufficient glandular secretion. Some of the former have been enumerated under neighborhood symptoms, but in addition, states of excitement, depression, psychoneurosis, and even hallucinations may develop. Lassitude, torpidity, and drowsiness are among the earliest symptoms. Lesions involving the frontal lobes give rise to such symptoms as impairment of memory, disorientation, untidiness, apathy, and stupor. Children suffering with hypopituitarism are usually temperamentally dull and apathetic, and are backward in their studies. They are usually irritable and often have difficulties with their playmates because of their lack of self-reliance and self-control. As a result of insufficiency of the pituitary gland mental symptoms frequently develop which vary from a mild psychosis to advanced forms of epilepsy and insanity. Beverly Tucker ascribes to the pituitary certain psychoses of

adolescence some of which he attributes to hyperpituitarism, others to hypopituitarism. The latter he divides into two groups. The commonest psychosis resembles dementia praecox. The preadolescent symptoms are negligible. The patients begin to be dull in their studies, seclusive, and self-absorbed. Repetition of movements is common; hallucinations and delusions may or may not be present. They have difficulty in expressing themselves in writing, and are usually unemotional and unaffected, and obstinate and irritable when disturbed. There is thickening and enlargement of the clinoid processes but the sella is about normal in size. To another group belong those cases in which the psychosis is not very profound. It consists chiefly of irritability, mental dullness, tardiness, truancy, and general lack of ambition, and in some cases epileptiform seizures. Roentgenograms show a small crowded fossa. A special form of hypophyseal psychosis has been described with confusional states and narcolepsy as the chief symptom (Tom Williams). Other psychic manifestations are lack of emotional inhibition, highly excitable states alternating with sluggishness, frequently phobias and compulsions, and moral and sexual obliquities, characteristics modified by pituitary feeding (Timme). The narcoleptic attacks are not attributed to a secretory disturbance of the pituitary gland. They are a part of a syndrome in which symptoms of cardiovascular irregularities occur; namely, tachycardia, arrhythmia, extrasystoles, embryocardia, and hypertension in addition to polyuria and polydipsia; according to the experimental observations of Ashmer J. Camus and G. Roussy the entire syndrome can be produced by excitation of the tuber cinereum and infundibulum. This view is supported clinically by a case in which at autopsy the hypophysis was normal, but a tumor of the third ventricle was found.

It has also been shown experimentally that if the whole gland or a very large portion of it be removed, profound somnolence is apt to develop. This is associated with a subnormal temperature, slowing of the pulse and respiration, and diminished sensitiveness to pain, symptoms which frequently improve on the administration of pituitary gland substance. Somnolence has a tendency to occur periodically, sometimes daily aside from the habitual sleeping hours, and then again with days intervening during which they respond fairly normal, and the sensorium is reasonably clear. It is this condition which suggested the possible relationship between the function of the hypophysis and hibernation in animals as first pointed out by Gemilli (1906) and later emphasized by Cushing. Persistent yawning, which often accompanies drowsiness, is a characteristic feature. The entire syndrome of somnolence, yawning, dullness, apathy, etc., with the presence of a clear sensorium shows a striking analogy to that of encephalitic

lethargica. The fluctuating character of the former and the mode of onset are the chief differentiating features. Attention has been called by Cushing to the relation of epileptiform seizures to lesions producing hypopituitarism. The so-called uncinate attacks are caused by a lesion extending into the interpeduncular region, producing pressure on or irritation of the uncinate gyrus. The aura is characterized by hallucinations of taste and smell. Sometimes the gustatory and olfactory phenomena with temporary loss of memory constitute the attack; at other times the attacks are more complete with marked convulsive seizures. General epileptiform seizures, which occur without uncinate factors, are probably due to glandular insufficiency, the result of hypoplasia. On the relation of epilepsy to pituitary disorders the following is quoted from Cushing: "One may reassemble the data in regard to the possible relation of hypophyseal insufficiency to epilepsy as follows:

"1. Horsley, it will be recalled, in his first experimental hypophysectomies in the canine observed no post-operative changes whatsoever in the condition of the animals. They were, however, used subsequently as subjects of cortical stimulation, and he noted that the motor cortex was unusually excitable.

"2. As already stated, we have observed a tendency to epileptiform convulsions in a number of our animals kept for long periods after partial hypophysectomy—animals that ultimately exhibited symptoms which we attribute to glandular insufficiency.

"3. The study of a series of cases of hypophyseal disease in man has shown that epilepsy—a symptom unobserved in states of hyperpituitarism—is a frequent accompaniment of clinical conditions in which an insufficiency of the gland is manifest. Moreover, that the brain, under these circumstances, is possibly overexcitable is suggested by the number of individuals in whom gustatory attacks have occurred under the influence presumably of a direct local irritation of the adjacent uncinate cortex by the enlarged gland.

"4. As is well known, epilepsy is a frequent sequel of cranial injuries. In certain types of injury, as the common bursting fractures of the base, the pituitary body is prone to be damaged.

"5. If, as we believe to be the case, the posterior lobe secretion normally enters the cerebrospinal fluid and thus comes to be in solution in a fluid which subsequently bathes the cortex, it is possible that its diminution from hypophyseal disease or injury may unfavorably affect the activity of the cortical cells. On this basis it is conceivable that a local scar which involves, or a tumor which presses upon, a given area of the cortex, may prevent the access to the cells of a substance which is essential to their functional stability.

"6. Many individuals, supposed to be suffering from so-called genuine or essential epilepsy, present manifestations of a nutritional disorder—a tendency to adiposity and a high sugar tolerance, coupled with a lowered temperature and pulse rate, closely akin to the constitutional state which characterizes hypophyseal deficiency. In some of these individuals the administration of hypophyseal extract has served to moderate the seizures from which they previously suffered."

Johnston, basing his opinion on the x-ray findings of the sella turcica, states that the factor chiefly concerned in a certain group of cases of epilepsy is a mechanical one. The small roofed sella which encroaches upon the gland interferes with the normal blood supply and physiological activity, in consequence of which the animal economy is deprived of those substances produced within the pituitary, necessary to stimulate normal metabolism. He substantiates his view by the fact that these cases are benefited by pituitary feeding, and suggests that relief might follow the resection of the clinoid processes; in other words, by a sellar decompression. Numerous other researches have been made along this line, the results of which are too vague and indefinite to enumerate.

The secretion from the posterior lobe of the hypophysis is poured into the cerebrospinal fluid, though some investigators contend that part of it is poured into the blood stream directly. At any rate, the effects of the secretion of the posterior lobe are undoubtedly pressor, producing vaso constriction, peristalsis, also contraction of other smooth muscle as the uterus and bladder. This action is most probably due to a stimulation of the sympathetic nerve endings in the smooth muscle.

The most outstanding symptoms of posterior lobe deficiency are hypotension, increased sugar tolerance, diminution of basal metabolism, and asthenia.

The gonads are composed of two types of cells, those cells having to do with reproduction, the gamete cells in the male and the Graafian follicle in the female, and those interstitial cells of Leydig which produce a definite internal secretion. This interstitial hormone acts as a connecting link between the soma and the gonads and through this specific action, particularly marked in the male, exercises a direct and specific stimulus upon the somatic structure of the body, thus increasing growth activity, causing definite lines of development, varying in sexes, and so affecting the whole muscle and nerve metabolism as to produce profound and far-reaching alterations. It is extremely difficult in the present state of our knowledge to discuss, in an intelligent manner, the relationship between the sex glands and the vegetative system. Both ovaries and testicles are innervated by sympathetic nerves, and the secretion from the testicles, according to Wheelon, is sympathicotropic,

while that from the ovary seems to be different, as shown by Hoskins and Wheelon. Castration of males caused a lowered irritability of the sympathetic system, whereas spaying of the females caused a heightened irritability of the same system. Wheelon and Shipley estimated that castration of males lowered sympathetic irritability by fifty percent. The internal secretion of the ovary, or at least that of the corpus luteum, is also sympathicotropic, if we may judge from the clinical symptoms which appear preceding the menstrual flow and those at the beginning of pregnancy or after cophorectomy, when the menstrual cycle suddenly ceases, or at the climacteric, when the secretion is gradually withdrawn. During the latter half of the menstrual cycle the secretion from the ovary exerts a marked nervous and psychical influence upon the patient. This influence, as expressed through the vegetative nervous system, seems to be preponderantly that of sympathetic stimulation. The pulse usually increases in rapidity, the blood pressure becomes higher, the temperature is elevated, and a slight neutrophyllic hyperleukocytosis is noted. While these symptoms may be evidence of increased sympathetic stimulation, we cannot claim that they are wholly due to direct stimulation of the sympathetic nerves, because this physiologic process makes an impression upon other organs of internal secretion, such as the thyroid, pituitary, and suprarenals, and upon the nervous system as a whole, and probably, most of all, upon the psychical centers. Immediately following the commencement of the flow, a general relaxation of tension takes place. Nervous and psychical irritability disappear, the pulse becomes less frequent, the temperature drops, and blood pressure falls.

The gonad syndromes are so interlinked with those of the other endocrine glands, especially suprarenal cortex, the pituitary and the thyroid, that it is difficult to single out any set of symptoms and ascribe them to gonadal dyscrasias. The symptoms vary considerably, depending upon the age of the individual when the (usually surgical) loss of the gonads takes place. In early loss in the male (castration before puberty, destructive orchitides) the penis, prostate and seminal vesicles remain small, erotic desire fails to show itself, and potency is lost. In the female a similar failure of development takes place. The girl is apt to grow tall, boyish in type, with infantile secondary characters. Later loss, after puberty, tends to increase the size of the skeleton—a tall, thin, type and short, fat, dumpy type with broad hips, female fat distribution on the breasts, buttocks and iliac crests. The lower extremities develop disproportionately more than the upper, or vice versa. The head is flattened behind, the sella turcica widened, the superciliary ridge is apt to be prominent. The skin is usually smooth, cool, marble-like, poor in pigment and color; the hair

of the head usually thick while that of the face is absent or only downy, that of the pubes follows the female type of distribution—horizontal. Small thyroids, thymus, larynx, and wide pelvis are the rule. The average castrate is apathetic, with shambling gait, bent in his posture and a sleepy or indolent mental attitude. The face is usually fat, with puffy eyelids. The voice is high and thin. Erotic desires are not always absent nor is intercourse impossible, even though the penis is apt to be small. The female—artificial menopause—tends to grow stout and irritable, autonomic tonus is lowered, ptoses are frequent, vasomotor instability, with hot and cold flashes, with darting, jumping pains, anxiety, nervousness and flightiness develop.

The pineal gland, the island of Langerhans of the pancreas and the thymus gland are all considered endocrine glands. They are all supplied by the parasympathetic nerves. Their hormones have to deal with metabolism and probably have a very small role to play in a neurological way and should be treated from a medical standpoint rather than from a neurological way.

In conclusion, I wish to say that the clinical syndromes resulting from disease of the glands of internal secretion are almost always, or, I might say always, pluri glandular. The close relationship between the glands of internal secretion and their products with the vegetative nervous system, has been dwelt upon. The psychotic and the neuropsychotic symptoms have been enumerated in taking up the individual glands and their syndromes. The great effect of emotional shock, infection and toxemia upon the glands of internal secretion and their resulting effect upon the vegetative nervous system has been shown.

It would seem that a group of organs—the endocrine glands—which have in their power the regulation of the normal growth of the body, the proper development of the nervous system, the appearance of secondary sex characteristics, the reproductive cycle, metabolism, whether the individual shall be feeble minded, or highly intelligent, a sissy or a he man, a bearded lady or a woman endowed with purely feminine attributes, determines an individual's personality and his reaction to his environment must be highly respected.

I must admit, the field of endocrinology is in a state of chaos. There are many contradictory theories and glandular therapy so far is merei, empirical, but out of the chaos I am sure orderly facts will follow. The field is still open for investigation and indeed it is a most fascinating one.

SURGICAL ASPECTS OF ENDOCRIN- OLOGY*

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The discovery that there is a chemical control of bodily function in addition to a nervous control has appealed powerfully to the imagination of workers in the experimental and clinical fields of medicine. No subject has been more written about than the function of the ductless glands. The bibliography of endocrinology fills five hundred pages. There is a special journal of endocrinology and a special association for the study of internal secretions. This activity has had a great influence on the practice of clinical medicine and surgery. In fact there are indications that it is having an influence which is not entirely beneficial. It is time to consider how much we actually know about the glands of internal secretion and how much of this knowledge we can safely use in actual practice.

For such evaluation the symposium on endocrinology held at the last meeting of the American Medical Association furnishes adequate material. At this, Barker, Cannon, Aub, Carlson, and Hoskins presented papers, and Roundtree, Wilson, Boothby, and others took part in the discussion. The papers were excellent and the criticism was keen, even acrimonious at times. These men should know the subject if anyone does, and yet I am sure that if any of you will read the published account of the symposium, the one overwhelming impression you will receive is that the subject is at present in an extremely chaotic condition. The essayists and discussants themselves repeatedly emphasize this fact. Indeed Carlson's paper is devoted to showing how little evidence there is for many widely believed hypotheses on internal secretions.

Endocrinology consists at present of a few well-established and indisputable facts, a greater number of supposed or undemonstrated facts, and a vast amount of speculation, most of it without adequate foundation.

Says Carlson: “* * * * practically every statement made in regard to the ductless glands today requires qualification.” Says Roundtree: “Endocrinology is still young. It is still far from a science.” All that is actually known about the internal secretions can be, and is, stated in any good text book of physiology in six or eight pages.

A sense of ignorance is the beginning of wisdom, in endocrinology as in any other branch of learning. All serious workers in this field emphasize the point that what is needed is the patient collection of facts. They also emphasize the extreme difficulty of making progress, to which they consider illgrounded speculation a great obstacle.

(*) Third paper of symposium on Endocrinology presented before the Indiana State Medical Association at the Muncie session, September, 1922.

Notwithstanding the above considerations, every physician should learn all he can about the function of the ductless glands. It is beyond doubt that they govern (1) the growth and development of the body; (2) the sexual functions and the development of the sex characteristics; and (3) that they have a controlling influence on metabolism. No one should today practice surgery without a knowledge of these important facts, but this knowledge should be controlled by a realization of how little we know about the means whereby the ductless glands exercise their functions. The limits of time forbid that I consider in detail the manifold points of surgical interest of the pituitary gland, the thyroid, the pancreas, the adrenals, the sex glands, etc. Such a review would, under the limitation of time, be haphazard and sketchy. I must be content to consider the correct attitude of the surgeon toward diseases, and supposed diseases, of these organs, and how he should proceed with the study and treatment of the individual case. A study of first principles is especially indicated in a branch of surgery so confused and uncertain as this.

An eminent clinician has recently pointed out that much of the uncertainty arising in the study of diseases of the ductless glands is due to confusion of clinical syndromes with theories as to the cause of the same.

In other words we start with a theory of what is causing the patient's trouble and make the physical findings and case history fit the theory. Such placing of the cart before the horse is, of course, a mistake liable to be made in the study of any complaint, but it is peculiarly common in the romantic and fascinating field of endocrinology. It would seem that many men who have pondered over much on this subject have become victims of systematized delusions about it, so persistently do they search till they have fitted every symptom they observe into some endocrine complex.

At the risk of seeming to explain the obvious, I wish to insist that safety in this field lies in first collecting every possible bit of information about the patient, from case history, physical examination, and laboratory tests. Not until these data have been critically examined, the proper relative importance assigned to the individual facts, and everything which is not certainly true rejected, should the clinician seek to discover a cause for what he has observed. Finally a diagnosis of disease of the ductless glands should not be made till every other possibility of diagnosis has been excluded.

In a branch of medicine so uncertain and theoretical as this, these rigid criteria are necessary for safety and progress.

We may illustrate the foregoing principles by considering the study and treatment of so-called hyperfunction of the thyroid. I select a disturbance of this particular organ because more

is probably known about the thyroid than any other ductless gland.

Suppose a patient presents himself with a history of extreme nervousness, loss of weight and strength, sweating, diarrhea, increased heart action, etc., and that on examination we find that he has exophthalmos, certain characteristic eye signs, an enlarged and vascular thyroid, a rapid pulse, muscular tremors, and a greatly increased metabolic rate. This is a well-known syndrome which we call Graves' disease. So far we are on safe and certain ground. Beyond this point speculation begins. What is the cause of Graves' disease? "Hyperfunction of the thyroid with production of an excessive amount of its hormone, which causes an accelerated oxidation in the tissues, which produces the clinical manifestations observed," you may answer. You may add that the truth of this argument is proved by the fact that when in such cases the activity of the thyroid is diminished by diminishing its blood supply or by excising the greater part of the gland, the disease is cured. That these surgical measures greatly benefit most cases of Graves' disease is perfectly true, and this is an unanswerable argument for their use. Nevertheless it does not prove that hyperfunction of the thyroid is the cause of the disease. This is only one of several possibilities. The disease may be caused by the excretion of a toxic substance by the thyroid, or it may be produced by stimulation of the thyroid by some unknown agency. We are unwise if we do not at least keep an open mind on this matter. For there are things we do not understand about Graves' disease, e. g., why the symptoms associated with adenoma of the thyroid are not altogether the same as those of exophthalmic goiter, and why all patients are not cured by thyroidectomy performed in the early stages of the disease.

While for practical purposes the management of a fairly typical case of Graves' disease is reasonably satisfactory, what can we say of the diagnosis and treatment of cases which present only a few of the manifestations given above? Suppose the chief symptoms are increased heart rate and nervousness without enlargement of the thyroid? Or some enlargement of the thyroid and auricular fibrillation? Or general weakness and increased heart rate? In cases of this kind we should be especially careful not to let our idea of the possibility of the presence of hyperthyroidism blind us to the possibility of other causes, as pulmonary tuberculosis, various nervous disorders, the presence of latent infection, and possible physiologic activity of the thyroid.

In light of the foregoing considerations it is unnecessary to discuss such surgical procedures as thyroidectomy for the cure of dementia praecox, adrenalectomy for the cure of epilepsy, or ligation of the vas in old men for the restoration of virility.

The principles illustrated in the case of the thyroid are a safe general guide in the surgery of the other ductless glands. It should be borne in mind, however, that with the pancreas, adrenals, and sex glands, the matter of chief surgical interest is that of insufficient function, e. g., diabetes for lack of sufficient pancreatic tissue; Addison's disease from destruction of the adrenals, and the symptoms of a premature menopause from loss of the ovaries. As yet the surgery of these organs is most important from the prophylactic standpoint. Grafting of ovarian tissue I regard as a justifiable operation because it is attended with but little danger and may do good.

The foregoing remarks have been meant to apply to surgical diagnosis and treatment having for its object the relief of disturbed function of the endocrine organs. They apply only indirectly to operations on these glands when they are the seat of tumors or other grossly demonstrable disease. One well established fact makes such operations safe in nearly all cases. This is, that nature has provided a great excess of tissue in the case of every endocrine gland. This excess is six to eight times the normal need of the body for the particular function involved.

SUMMARY AND CONCLUSIONS

In this paper I have emphasized what I regard as the most important aspect of endocrinology from the standpoint of the surgeon. This is the uncertain and fragmentary state of our knowledge about it. In the dark we must move cautiously. Therefore in the diagnosis of supposed endocrine disease, or in the operative treatment of the same, we must employ the most rigid criteria of judgment, and not allow theories of endocrine function to influence us, for today the truth of these theories is almost without exception undemonstrated.

These conclusions do not dispute the great physiologic importance of the endocrine glands; and should not discourage study of their functions. This study should be undertaken, however, with a realization of the extreme complexity and difficulty of the subject.

DISCUSSION

DR. EDGAR F. KISER (Indianapolis): Endocrinology is a science in the making and I am sure it is to be regretted that there is a tendency on the part of many men to decry it as merely a passing fad. Personally, I predict for the future of endocrinology an enormous place in medicine, and I speak of this from the medical side only. The very fact that Dr. McCaskey has been able to present such concrete facts concerning the thyroid is pretty good evidence in itself that with the passing of time and with the study which we will be able to give the relation of the so-called ductless glands, we will have very nearly as definite a statement to make concerning other of the endocrine organs.

Perhaps the outstanding factor in bringing endocrinology into disrepute at this time is the unfortunate over-activity of some men who are exploiting it commercially. Our desks are covered with advertising literature coming from the far West and from the Atlantic, calling our attention to capsules containing this, that or the other substance that will do everything but grow hair on a bald head, and I think the disposition of most men is to jump to the conclusion that anything which is exploited in this way is of but passing interest. I am very sure that with the work that is being done by the better men throughout the country we will within a comparatively few years be able to interpret very intelligently the hyperfunction or the hypofunction of most of the glands of internal secretion.

The problem at this time of course is the matter of treatment, particularly the treatment of those diseases in which there is hyperfunction of some of the endocrine organs. Hypofunction is being satisfactorily met, especially as regards five or six of the more important endocrine organs. We know exactly what thyroxin will do, and what dessicated thyroid will do within certain limits. Personally, I am enthusiastic about the administration of ovarian substance. I believe in properly selected cases we have in ovarian substance a remedy which has been a God-send to a great many women. The use of pituitary substance I do not know so much about, except of course in obstetrics, where it has a limited field.

I am looking forward with eager anticipation to the further development of the work which McLeod of Toronto and his co-workers have recently done on the pancreas. In the *Boston Medical and Surgical Journal* some three months ago was a letter written to the editor by Joslin, discussing this work and speaking of it in such enthusiastic terms that I could not help but feel, coming from such a conservative man as Joslin, that before many months *insulin*, as McLeod has named his product, might offer the possibility of cure in diabetes, which as we know up to this time has been an utter impossibility.

It is such work as this, coming from men at the very head of the profession, that leads me to believe that it is only fair and right that we should judge endocrinology upon its merits, and neither accept nor reject the science as a whole until such time as it has proved itself.

DR. ALBERT E. STERNE (Indianapolis): I think you will agree with me that we know some well-recognized physiologic facts as to the function of the various glands, but these facts are loosely strung together. The influence of the one upon the other is not clearly understood, and the present situation is chaotic and altogether unsatisfactory. A great many men think that they have solved a certain number

of our problems, but therapeutically, at the bedside and in the consulting room, our results do not by any means agree with the demonstrated facts in the physiologic laboratory. It does not work out, and probably for a very simple reason. The human body, with its complex mechanism, is decidedly different from a set of retorts or test tubes or any laboratory apparatus. Therefore what we see, at the bedside, of the phenomena which occur in diseases of various kinds is difficult to total and assimilate with known, demonstrated facts of the physiologic laboratory.

Hypotension is apparently easily met. On the other hand, hypertension has been comparatively illly met in the consulting room and at the bedside.

Another point which I want to barely mention is the fatal influence upon the individual, upon the mechanism of the body, upon the growth of the nervous system, of impairment in function of the chief glands of the endocrine chain (and remember that no link in that chain can be disturbed without influencing the whole chain), except those which have to do with the reproduction of species. That they have an influence is true, especially if they are removed early in life. I question very much, however, whether there is a marked gonadal influence late in life. I think that is largely superstition, and while it may be that ovarian extract has been a God-send, as Dr. Kiser has said, I have been rather convinced that most women come to the climacteric or any disturbance of the ovaries (and men relatively in the same way) in what you might call a psychic state. They think that something ought to occur—they are told it ought to occur. I cannot conceive, gentlemen, of a normal physiologic phenomenon like the climacteric leaving behind any marked disturbance, unless there is something wrong with the individual aside from that. So I believe it is largely a superstition that has been handed down. Women discuss it in their societies—they have an idea that at the climacteric something must show itself from the psychic or nervous side, and then if the doctor can convince them that ovarian secretion or any of the gland products will have a good effect, to some degree they may be relieved.

Practically all operations upon the endocrine system—surgery of the thyroid for instance—are empirical. The same is true of our medication in these cases. There is behind the manifestations, behind the group of complex phenomena in diseases of this system, something else. I think Dr. Emerson correctly touched upon that. It is the primordial nervous function that is fundamental. I, for one, am inclined to regard the ductless glands as a part of the autonomic-sympathetic nervous system, rather than glands *per se*. The integral relationship is so close that it is indeed difficult to determine, even

speculatively, which function is primary and which is secondary. The same truth is apparent to me in medical therapy—that in this particular phase of medicine we are dealing empirically with whatever trouble suggests itself.

We may successfully operate for hyperthyroidism by Basedow's disease by removing part of the gland, or by ligation perhaps: but herein we relieve only certain definite toxic effects which are a part only, albeit an important part, of the whole clinical syndrome. The Basedow complex still remains well defined after the operation. This operation has relieved, but not cured. It was an empiric measure.

DR. CHARLES P. EMERSON (Indianapolis): We are fortunate in listening to so splendid a review of the literature of this subject. As Dr. Sterne has mentioned, this literature is so voluminous that one must be cautious when selecting those whose authority he would follow.

In that connection I should like to make a plea that we get away from the old German physiological school and be loyal to the clinical school, for although the one will, or should, use as many test tubes and guinea pigs as the other (for without laboratory work there would be very little advance except in empirical medicine), nevertheless the difference between them is that the German school believed medicine was advanced in the laboratories and that what is proven in the laboratory is proven for the patient, while the clinical school realize that they must start at the bedside and in the laboratories seek the explanation of what they find there. In the field of endocrinology especially is this distinction important, for our ideas on this subject have become very confused because so many of them were gained from the study of animals and may or may not be true of men, and yet much of this animal work is the only ground for the many remedies on sale for these disturbances of the glands of internal secretion. The dealers say to us, "Test our products on your patients." The manufacturers make their preparations and ask practicing physicians to "test" them. Personally, we doubt that much progress can be made testing remedies on our patients about their work—the housewife with her domestic duties—the man with his professional or business cares. There are too many factors to consider. The manufacturers have no right to flood the market with all these preparations until they have been reproven under proper test conditions and with proper patients. That is, it seems to me that a society like this should have these drugs tested and then say, "Now you may sell your product." We are discredited by the things that have been tried on the public in years gone by and then abandoned. We may change our opinions as to certain drugs, but the public only remembers that we did recommend them ten years ago, and therefore we suffer.

Our subject is "The Endocrine System and the Central Nervous System". I am one of those who do not believe that the thyroid gland *controls* anything; it does it under control. I do not believe the adrenals *control* anything. I do not believe the pituitary gland controls anything. Of course if you use the term "control" in the same sense as we do of our automobile machinery when we say this lever "controls" the air, this "controls" the gas, well and good; but these little levers and switches do not run the machine. By means of them I run it. When as a boy I rode a velocipede it did not have levers and switches, but I rode it; then came the high bicycle, then the safety, each a better machine. Now I drive an automobile. The driver is the same. I rode before: now I ride better and have a better machine. Let us carry this argument into comparative biology. If an automobile concern should buy a shoe factory, we would expect the output to be automobiles, not shoes, and yet would see that the shoe factory was the older industry. Now from an embryological point of view what do we find? We find the thyroid gland was in lower animals a mucous gland whose secretion was useful to the tongue, but when the higher animal came into being he commandeered that factory for a very different purpose and made in it a certain internal secretion of immense importance to the body. We find that part of the pituitary gland originally belonged to the nose. Later nature commandeered that factory for a different purpose, in fact, to control sex life and body growth. It is said that the pineal gland was once an eye. In other words, if we believe in comparative embryology at all we must recognize that the nervous system is older than the organs and has used them to suit her changing purposes. These organs do not control; they are merely the machinery which has been developed for this purpose. Today we hear so much about internal secretions since the manufacturers can sell them to us. If they could sell us autonomic nervous systems undoubtedly they would.

Until the medical profession is willing to recognize the fallacy of this scientific period and go back to Greek medicine, which sought the agent behind the machine, until we realize the immense importance of the emotions in controlling body functions, we will not be able to handle this question of the internal secretions satisfactorily.

We must remember that there is no proof that thyroxin is the hormone of the thyroid gland, although we know that it is a very potent drug manufactured from the thyroid gland; that there is no evidence that adrenalin is a physiologic product, although it is a very valuable drug and we could scarcely get along without it. But we must be careful in discussing this

subject not to identify a drug made from a gland which may give almost the physiological action of the gland as necessarily the physiological hormone of the gland. But even if they were the true hormones their production represents the activity of the central nervous system, which controls the activity of that gland. We have the great emotional side of our patients to deal with, and if a man is not willing to consider that first, I do not see how he can expect to get very much from using these internal secretions.

The matter is in chaos, and yet we doctors are in a certain degree the "goats". We are the ones who sell the public an immense amount of "internal secretions" products. We certainly get no profit from it now and we certainly will get a great deal of criticism if later we abandon them. We have no right to advise so much therapy of unproven value.

The point I would like to make is this: The real education of the public must begin in the State Medical Association, and this Association must be very careful in determining what it should teach the public and what it should not. If we can get the confidence of the public by proving accurately, first the things we prescribe, then I believe they will obey a great deal more readily when we suggest surgery, for instance in carcinoma.

We are discussing, not internal secretions in general, but the nervous system and the endocrine organs, and we believe it is the nervous system which controls the function of the endocrine glands. You may say this is a quibble concerning the term "control". It certainly is more important than a quibble, since the misuse of that term has led to the experimental use of a great deal of glandular extracts which have never been thoroughly proven. I happen to know the very first man in the world who was ever saved from myxedema. I knew him twenty years after, and he still used thyroid tablets. Try to get the better of him in an argument and you must needs be pretty bright. But here is the point—that drug was first proven experimentally on animals, second, it was reproven on man, and third and lastly it was put into general use. If we had waited for that proof in the case of a lot of these other things on the market, they would not be sold today.

DR. TOM JONES (Anderson): Dr. Gatch was entirely right when he said that from a surgical standpoint, endocrinology is in its infancy. To my mind, with the possible exception of surgery of the thyroid, the surgical phase has not yet been born. When you consider all the different theories you can readily see that the surgery of the ductless glands cannot yet be placed upon a solid foundation. It is necessarily destructive rather than constructive surgery, and deals principally with the hypersecreting glands. It is comparatively easy, purely

from the standpoint of hypersecretion, to destroy part of a gland and stop the excess output of the extract. Theoretically that is true; practically, it is not. Even in surgery of the thyroid we know that many times after the thyroid has been removed the symptoms are not improved. Why is it? That is a question that has not been answered satisfactorily. To my mind, any surgery of the ductless glands, with the possible exception of the thyroid, is extremely meddlesome surgery.

DR. CHARLES H. GOOD (Huntington): We have certainly had a very scientific discussion of the subject of endocrinology, and as general practitioners we know that corpus luteum is a valuable remedy, we know that ovarian extract is a valuable remedy, that thyroid extract and adrenalin are marvelous, but when it comes to pituitary extract I think it is the most marvelous in the history of medicine, and the man who discovered it should rank along with Harvey, Pasteur and Lister, and have a monument in this country. But in the hearts of the mothers of this country pituitary extract will live without a monument.

DR. G. W. SPOHN (Elkhart): Dr. Gatch was understood to say that nature has made provision for the tissues of the body—that is, that there is five or six times as much tissue as is needed. In other words, the thyroid gland has five or six times the capacity the system needs. If he can prove that I wish he would do so.

DR. CHARLES S. BOND (Richmond): I want to compliment the authors, especially the surgeons, upon the very conservative view they take of this proposition. Just a few years ago we went to the other extreme, but now we are coming back, and I think it will be a benefit to the human family. We all have our horizons. We all go into the sickroom, draw the curtains down on all sides to conform with our individual eccentricities, and make a diagnosis according to our view. That view may be very extensive, or it may be based on very little knowledge. Every doctor is more or less subject to mistakes because of his viewpoint. Conservative medicine certainly would be the proper standpoint for the men of this Association, because we will be making mistakes which will count more than not to give medicine at all, or not to do surgery at all. The great trouble now is that we are overdoing everything we undertake. Thyroid extract was introduced, and we used it to excess; the same with pituitrin. We will have to get away from that proposition before we get down to the real facts.

In regard to surgery of the thyroid, you know how many different views are already taken. In the first place, there is disturbance in the body outside of the thyroid, brought about by excess in some particular way, and the thyroid is affected. It makes too little or too much

iodine. Do you take out a part of a radiator to stop the heat from coming from the basement? Everybody would say that is very inconsistent, although for the time being the room is less heated. But would it not be better to go down cellar and put out the fire? We are coming to the point where we must not consider single, isolated facts, but all the underlying facts connected with this subject. Not one gland only, but the other glands involved. We must take the body as a whole and study it from that standpoint, not from isolated facts either in medicine or surgery. Then will we come nearer the truth.

DR. GEORGE F. KEIPER (Lafayette): Dr. Bitler touched on one phase of this subject that I think is worthy of very serious consideration—the relation of the endocrine organs to personality. Personality has to do with mentality, and mentality has to do with psychology. Psychology has to do with the individual nerve cells of the brain, the central nervous system. We have learned that it is very hard to tell where body leaves off and mind begins, where physiology ceases its work and psychology begins. If we go into the laboratory for study of the mind we find it is based upon the study of physiology, and the students are started along that line. Max Nordau in his work on "Degeneration" says that after all memory is nothing more nor less than the product of stored-up nerve cell action. So all our psychological processes are the product of nerve cell action. If these endocrine bodies have anything to do with our psychologic processes, and they evidently have, it certainly behooves us as physicians dealing with the mental states of our patients to enter into a very serious study of these endocrine bodies.

DR. CHARLES STOLTZ (South Bend): I have watched, as an innocent bystander, this endocrine theorizing since the days of Brown-Sequard, and it seems to me that most of the stuff is the result of laboratory juggling and ought not to be released from the laboratory until better digested. Then we would not get into such a hopeless muddle.

DR. J. R. EASTMAN (Indianapolis): This has been one of the most remarkable exhibitions of therapeutic nihilism that I have ever witnessed. I believe that much practical good has been accomplished by the study of endocrinology. For example, I believe that we are today in a very much better position with relation to the treatment of toxic thyroid glands than we were twenty years ago, and I believe that a great part of the credit which redounds to the medical profession for this advance is owing to the surgeons who have devoted themselves to the practical study of thyroid disease. I would not be true to my guild did I sit here and willingly permit the impression to remain in your minds which I suspect is there now,

namely, that surgery accomplishes very little in dealing with thyroid disease. I am one of those who believe that a tumor of the thyroid gland may represent the monkey wrench which can disarrange the whole endocrine machine; and I am one of those who believe that often by a simple surgical procedure the monkey wrench can be removed, followed by the smooth running of the machine. Just ask yourselves this question, you older men, you silver-tops here—What was done with toxic thyroid disease before men like Charles Mayo, the elder Kocher, Crile, Miles F. Porter and other men established the surgery of toxic thyroid upon a fairly rational basis? What did we accomplish before their time, and what is accomplished now in the treatment of thyrotoxicosis?

Reference was made to hemi-thyroidectomy in the disease dementia praecox. Inasmuch as no one knows very much about dementia praecox, I venture to say that with the syndrome of dementia praecox in an individual with large thyroid gland, one is justified, if symptoms do not point elsewhere, in assuming that the thyroid gland represents a focus of irritation, a site of endocrine imbalance, and as the removal of the large lobe can do the patient no harm, one is justified in performing a hemi-thyroidectomy in such a case. The results have proven that for some reason these cases do sometimes actually get well. I have personally had several cases of dementia praecox of the agitated type, with goiter, but without true thyrotoxicosis. Three of these patients had been condemned by lunacy commissions; two had been confined in insane hospitals, and yet four such patients after hemi-thyroidectomy are back at their former occupations as school teachers, stenographers, etc.

So I wish to sound this note: We are not altogether in chaos; some good has come out of the study of endocrinology; some good has come out of surgery in thyrotoxicosis.

DR. CHARLES A. SELLERS (Hartford City): It is a deplorable state of affairs when a surgeon is obliged to make the statement Dr. Eastman has made regarding the relation that exists between dementia praecox and thyrotoxicosis or exophthalmic goiter. There was a close relationship between the symptoms of thyrotoxic goiter and dementia praecox in two of my cases, but they were diagnosed as thyrotoxicosis and not dementia praecox. If we are watchful with our patients (and the general practitioner is the one who sees these toxic cases first) we should never make the mistake of sending anyone to the insane hospital when he or she has a thyrotoxic goiter.

As general practitioners we have not given the very early symptoms of disturbed thyroid the attention they deserve. Of course we all believe that the ideal method of handling goiter is to prevent it.

There is not much question that these cases should be handled surgically, but it must be remembered that exophthalmic goiter cases continue to be exophthalmic cases; they are not cured, but surgically relieved.

Thyrotoxicosis in the beginning is curable with rest, but we general practitioners are not giving this method of treatment the thought it deserves. If we could give these patients as much rest as the surgeon does, I am quite certain that we could cure many a case that otherwise would eventually result in a surgical exophthalmic goiter.

DR. GRACE L. HOMMAN (Laporte): I heard Dr. Sterne say that the disturbances which come on at the menopause are psychic. I believe that is not true. He admits later on that the endocrine glands have much to do with the nervous system. I cannot quite understand why we should not have some disturbance when the ovarian secretion is withdrawn, inasmuch as it is a physiologic process. I believe if all the men had to go through the menopause, with its hot flashes and other annoying nervous disturbances, that about ninety percent of them would be called neurasthenics.

DR. GEORGE W. McCASKEY (closing): I wish particularly to comment on a few remarks made by my good friend, Dr. Emerson. He says that these hormones, the active principles of these glands, do not control anything. Well, that depends perhaps on his definition of "control". If there is any one fact which has been proven beyond peradventure of a doubt within the last decade, it is, in my opinion, that thyroxin in the tissue cells does control the metabolic processes of the body. They will go up with an increase of thyroxin; they will go down with a diminution. It may be that thyroxin, exactly as we know it, is not produced in the laboratory of the thyroid gland; but the studies of Kendall and the close relationship of the functional activity of the thyroid gland to the metabolism seem to indicate that this hormone with a certain kind of iodine does, in the sense in which I would use the word, absolutely control certain metabolic processes of the body. The nervous system of course controls the hormone output, and it may be that this is what Dr. Emerson has in mind. But the nervous system itself is just as dependent upon thyroxin as any other tissue, and its metabolism is equally controlled by thyroxin.

I do not know that I can agree with Dr. Emerson that we do not know that any of these hormones as such actually exist in the blood. It is true, for instance with reference to epinephrin, that the adrenal gland and all of its constituents have been subjected to violence, they have been destroyed, and these products might easily be synthetic. But how about the fact that there is something in the blood in the lumbo renal vein which can be demonstrated

pharmacologically to produce the same effect as adrenin.

The limitations of our knowledge are great. It has been brought out that destruction of the cortical substance of both glands will produce death. No single chemical body has ever been isolated from the cortical substance that furnishes any explanation of this fact.

Referring to the hypophysis, we have no reason to doubt that it does in a sense control growth. The only substance known to science today which is derived from the anterior lobe is tethelin, the only physiologic product like adrenin from the suprarenals.

In spite of all its drawbacks and the improper state of development in many directions, endocrinology is essential in the diagnosis and treatment of a very large number of cases. Neither the internist nor the surgeon can get along without it.

DR. C. C. BITLER (closing): Endocrinology is a most important subject. The endocrine system is so closely linked with the vegetative nervous system that to have a comprehension of the endocrine system with its effects you must have a clear conception of the vegetative nervous system and its workings.

The internal secretions undoubtedly have a great influence on the individual's personality and his reaction to environment.

DR. W. D. GATCH (closing): I might compress my paper into one sentence: The most important fact in our knowledge of the endocrine organs is the limitations of our knowledge. This should make us conservative and careful about what we do in diagnosing supposed endocrine disease, and especially cautious about performing serious surgical operations on this diagnosis.

In regard to the question which was asked about the normal excess of endocrine tissue, I did make the statement that there is a large margin of safety provided by nature in all the endocrine glands. I think that is established clinically and experimentally in all of the well-recognized endocrine glands. You can excise up to five-sixths of a thyroid gland and the patient will manifest no symptoms of insufficiency. The same thing is true of the adrenals, experimentally. I might point out that the very fact that nature has provided such a large margin of safety in these glands makes it extremely difficult from a diagnostic standpoint to recognize small degrees of hypofunction.

I did not say that thyroid surgery was useless. I practice thyroid surgery and believe in it heartily. I was simply pointing out the necessity for going slowly and for ruling out other possibilities before we resort to thyroid surgery. I selected the thyroid because we know more about it than any other ductless gland. If our knowledge is incomplete there, how much more so must it be with regard to the other glands.

EPIDEMIC JAUNDICE*

S. C. WATERS, M.D.

MIDDLETOWN

The nomenclature of jaundice, like others we have inherited, is not satisfactory. The naming of a disease after a terminal symptom cannot be considered scientific, while the other terms connected with it are used in such a haphazard manner that it creates confusion. The name infectious jaundice is used by various writers for at least three different conditions: Weil's disease, jaundice when secondary to some other disease, such as pneumonia or some septic infection, and the form described in this paper. But while the terminology as used is unsatisfactory, it would be fully adequate if writers were more exact in its use. The disease to be discussed in this paper will be distinguished as epidemic jaundice as this describes it, and that it may not be confounded with catarrhal jaundice, Weil's disease or secondary infectious jaundice.

Our text books, under the head of catarrhal jaundice, after describing the symptoms and giving the cause as stone, bacteria and chemical, make the brief statement, "It may occur as an epidemic." But an epidemic as extensive as we experienced, which ran as true to type, with as selective a location, must have a specific cause.

An acute infectious jaundice called Weil's disease can be excluded for it differs in occurring in males most frequently, occurring during the summer months, in patients between the ages of twenty-five and forty, is somewhat occupational, as ditch diggers and butchers are more susceptible, and this is probably the form affecting armies. It probably is a more serious disease than epidemic jaundice. It very likely is the form of jaundice in which the Japanese investigators found a spirillum that they named leptospiro icterohaemorrhagiae. This organism appears in the blood of patients on the second or third day and in the urine on the eighth day. It can readily be cultured by intravenous or intraperitoneal injections of the urine in animals.

The redundancy of this name has apparently impressed the United States Health Service and various writers in this country for they have assumed that the epidemic of jaundice occurring in this country was caused by it. But numerous investigators in several hundred cases examined have failed to find it in a single case. Rats have been found with what is supposed to be an identical organism. While the New York State Board of Health studied epidemic jaundice, one of the laboratory workers accidentally inoculated herself with the rat infection. She ran a course of infection differing in many respects from the epidemic jaundice and

(*) Presented before the Section on Medicine of the Indiana State Medical Association at the Muncie session, September, 1922.

although the published report stated that "there was no connection between this case and the cases of jaundice being studied", this is overlooked, and the public press published, and many doctors believe, that the cause of epidemic jaundice was definitely established.

Blood and urine from some of my patients was sent to the Rockefeller Institute of Medical Research but proved negative.

For many years an occasional paper has appeared describing epidemics of jaundice occurring at camps and colleges without much attempt at classifying the form. Herriman of New York City, in 1913, described an epidemic appearing at a child clinic with 98 cases, and again in 1917, one with 24 cases, nearly all occurring in children between three and ten years old. He was the first and only one to classify it as a disease of childhood. At that time he was of the opinion that it was a mild form of Weil's disease; "that the infectious material enters the body through the nasopharynx; that it is a primary infection of the liver and not an ascending infection from the duodenum; that there is no evidence of its being conveyed by food or water; that the infection takes place by direct contact; that it is only slightly communicable, for most persons have a natural immunity and that one attack renders a person immune; that it is more common in children because they are more susceptible and have not been immunized by previous attacks; in camps (and the same applies to colleges) because a number of susceptible and non-immune persons are brought in contact."

Within the last two years frequent reports of epidemics of jaundice occurring in many of the northern states have been made, so they have apparently become more frequent or are attracting more attention than formerly. Epidemic cases may occur at any time but so far as recorded the epidemics have been confined to the late fall and the early winter months.

Epidemics of jaundice may not be as uncommon as they are unnoted. A number of years ago nearly all of the pupils in a country school in our neighborhood were jaundiced.

For ten weeks following October 1, 1921, Middletown and its immediate vicinity, with a population of about 3,000, equally divided between town and country, had at least 150 people affected with a gastro-hepatic disturbance that terminated in jaundice. This is a greater proportion than heretofore have been affected with any other one infectious disease at one time, including influenza. There were no fatalities, but the total morbidity was great and the loss from school and work considerable. During this time many cases appeared at Bluntsville, twelve miles to the east, and at Markleville, the same distance to the west of Middletown. Other cases appeared at towns bordering this area. This probably marks the extent of territory invaded by the epidemic.

Forty cases were studied and tabulated. This included only the worst cases in which jaundice was well marked. The tabulation does not include cases with all of the other symptoms, or some of them but were not jaundiced, those of the family that have had the same thing but were not seen by me, those waited on by other doctors or others known of but had no doctor, but only cases seen by me personally¹.

These cases had all been in contact, they had all used city water, but this had proved good immediately before and during the epidemic. Food could be eliminated as a cause on account of the wide distribution of the cases.

The first two cases were illustrative of the entire series.

Case 1. Young man, clerk in grocery, suddenly taken sick with vomiting and pain in stomach, tender over liver. Temp. 101. This continued for four days, complained greatly of soreness over body, especially limbs, "as if he had been pounded, and felt like he was drunk". He lay or sat in a listless manner and looked quite sick. On fifth day he spoke of peculiarly colored urine, and on examination found it heavily charged with bile. I prognosed that jaundice would appear. On the seventh day of his sickness he was quite icteric, but was up and around and rapidly grew better. Three weeks after his sickness he reported that he never felt better and weighed more than he ever had.

Case 2. Delicate school girl aged nine years, living just across the street from Case 1. Taken sick in same manner, suddenly vomiting, pain in epigastrium. Vomiting and pains continued for ten days. Temperature reached as high as 103. Epistaxis, vertigo, diarrhea at first. Bile in urine on fourteenth day, but skin and sclera did not show it until the twentieth day. While she was sick I was called to neighboring family to see two brothers in same bed with primary symptoms, and to see three children in one family in the country with the same. And from this it extended.

A case history of each would not be of interest as they ran much the same course and a summary of my forty cases will suffice: Living conditions, both good and bad. Sex, equally divided, twenty males and twenty females. Ages, 3 to 23, one exception was 39. Thirty, or 75 percent, were of school age. Five were under and five were over school age. Previous health, the delicate were more sick and more susceptible—one exception, a fourteen-year-old girl in advanced pulmonary tuberculosis, who

(1) Some of the untabulated cases were of great interest. Four infants in families with jaundice had all of the symptoms but were not icteric. One five-month-old baby, entirely breast fed, had a temperature of 105. One six-pound baby, born of healthy parents, twenty-four hours after birth had vomited, a temperature of 104, and became icteric. This all continued for ten days, when at the request of parents and on advice of consultant, surgeon reluctantly operated and found inflammatory adhesions constricting duodenum about one inch below pylorus.

has since died, ran a mild course. None had acute respiratory symptoms. Four had had their tonsils removed. Prodrome:—This was indefinite as I saw but few cases the first two days. Some had chill but not pronounced, the most of them slight fever from one to three days, one for ten days. Temperature from 100 to 101, the highest 103. If any prodrome before vomiting it must have been short. All complained of malaise and nausea, soreness rather than aching, none complained greatly of headache. One six-year-old boy had an initial convolution². Dizziness was a very constant and early symptom. One on arising in the morning started for another room to build a fire but had to sit down to avoid falling, later vomited and ran regular course. Diarrhea occurred in only four cases, the others had taken cathartics. Vomiting was an early and constant symptom, but varied from once to several times a day for ten days. The average case vomited for three days. Vomitus showed no peculiarities, only stomach contents and secretion, no excess of mucous or bile. Laboratory examination revealed nothing bacteriologically. One reported blood in vomitus. Pain was synchronous with vomiting and was of varied severity, none required hypodermics of morphia. The location of pain invariably over the epigastrium. Liver but slightly enlarged in few cases, in some it apparently could be outlined more plainly than normally. Icterus occurred on the fifth to twentieth day. Only one on the twentieth day and one on the twelfth day, twenty showed on the seventh day, or in just half of the cases.

Jaundice was of various grades, from light lemon to greenish yellow, always plainest in sclera. Some said it rubbed off on sheets. It lasted from two days to two weeks. Puritis of various degrees generally occurred when icterus began to fade. Bile showed in urine one or two days preceding appearance of icterus of skin or sclera. The average loss of time from school or work was two weeks. Stools very offensive and usually clay colored but sometimes bile continued to show in them.

In seven instances and in 50 percent of the cases more than one member of the family was affected at the same time. If there is an incubation period it must be very short, for there were no successive cases, but the different members were taken sick within a few hours of each other. There was one exception, two were taken sick one week after two others had it.

Recovery was usually prompt after appearance of icterus, but they all had the appearance of having been through a severe sickness. Some reported an unusual appetite after recovering, while others appeared anemic.

(2) I know of one other five-year-old boy who had an initial convolution.

Treatment: They had all taken physics before I saw them, and I gave very little thereafter for I found it increased the irritation and pain of the diseased parts. Other treatment was symptomatic. Used various intestinal antiseptics; for vomiting, gave chloroform water; for pain, camphorated tincture of opium was satisfactory. Hexemethylanamine or phosphate of soda and murate of ammonia have been suggested as satisfactory treatment. Many of them were given ferruginous tonics during convalescence.

These cases intrigue one to speculate on the future of these patients—will this acute disease leave a permanent nidus for chronic disease of the gall ducts and bladder and the duodenal tract? That it could cause very serious sequela was very decisively shown in two cases. One nine-year-old girl, three weeks after onset of the disease and one after apparent recovery, after definite exposure, developed an acute diffuse nephritis, fever, severe headache, edema of hands, feet and face, 1 percent of albumen in urine. The other girl of eleven, five weeks after onset and two weeks after apparent recovery had severe chill, temperature 104, short, painful respirations, lying on right side with thigh flexed on abdomen, right shoulder drawn down, painful to move or change position, tender over slightly enlarged liver, slight, painful cough with light rales in lower right lung. She recovered after seven weeks' severe illness.

A study of these cases, considering its intense malaise, seasonal and age incidence, its selective action, and the minor importance of the fever, has led me to the conclusion that the cause of the epidemic is the same as the cause of the epidemic of influenza in one of its protean forms, or another of as mysterious and subtle character. That it should be a spirillum necessitates the presence of an intermediary agent. The disease occurring during the season when there are no flies, mosquitoes or fleas and in a sanitary district where malaria, typhoid and diphtheria are unknown does not seem reasonable.

Conclusion: Epidemic jaundice is an entity, and distinct from catarrhal or infectious jaundice. The cause is unknown, but probably belongs to the same class or is related to influenza and lethargic encephalitis. It is essentially a disease of youth. Active catharsis is not indicated in its treatment. It is capable of grave sequela.

DISCUSSION

DR. W. M. STOUT (Newcastle): After listening to this very interesting and excellent paper I cannot help feeling that we are more closely acquainted with this disease which he has termed "epidemic jaundice". The thought has occurred to me that this should be made a reportable disease and one which we can quarantine. First, it would impress the medical profession with the disease of epidemic jaundice.

Second, by quarantining these cases we would be able to reduce both the morbidity and mortality; and third, we would have statistics from which to work, if the doctors would do the work conscientiously.

Living within a radius of twenty miles from Middletown, where this epidemic occurred, it was my good fortune to observe four cases. The first case was that of a girl of four years and was similar to those Dr. Waters described. I did not make the diagnosis of jaundice until I found that the child had been spending two days in Middletown. Two other cases, a girl of three and a boy of six, ran the typical course. A cousin of these children who was brought in while they were running the septic course developed a similar condition. This impressed upon me the infectious nature of the disease. The parents did not develop the condition, although they were comparatively young. One thing that was marked in these cases was a tenderness over the liver and the possible enlargement of the liver.

The route of the infection comes up for discussion. It is possible that it occurred through the nasopharynx, or that it began secondarily in the stomach and ascended to the liver through the lymphatic and blood streams. One observer has even reported that it might resemble paratyphoid B.

We will have to concede that there are four main types of jaundice: First, acute catarrhal jaundice; second, that due to gall stones; third, that due to cholecystitis, and fourth, that due to malignancy. The epidemic type resembles the first more closely, and it is yet to be seen whether there is a resulting cirrhosis.

These epidemics have frequently been encountered in schools and colleges far distant from research centers, and for that reason the pathology is in a more or less uncertain state at present.

DR. WILL SHIMER (Indianapolis): I think this paper should give everyone considerable encouragement, because Dr. Waters has described the symptoms, the course, the probable etiology and the method of transmission as well as it could be described by anyone. He has not had much laboratory or other assistance, but has worked it out himself.

Dr. Wadsworth, of the New York State Board of Health at Albany, had a good opportunity to study these cases. He started out with the idea that it was due to the leptospiro-ictero-hemorrhagica and investigated the possible presence of this organism in the blood and other parts of the body, but was unable to find it. Dr. Noguchi, who had the first chance in America to describe the leptospira, was unable to find them in these cases.

One of the other causes of jaundice is *B. paratyphoid*. Wadsworth cultured the blood

and the urine, but was unable to find any *bacillus paratyphoid*, so the New York State Board of Health did not succeed in finding the cause of their cases. They did find out that the disease was easily transmissible from one person to another. Cases were treated in Albany hospitals and nurses taking care of the children were easily infected with the disease, the incubation period being seven days. It is not only transmissible among children but among adults, and the cases run the typical course in adults as in children.

With reference to the possible mode of transmission, assuming that hospital nurses would take the proper precaution with reference to being infected with urine and feces, we are left to the respiratory tract.

As to the nature of the organism, I do not believe that epidemic jaundice is caused by the same organism that is responsible for influenza. Neither is it generally recognized that lethargic encephalitis is caused by the same organism. It may be that epidemic jaundice lowers the resistance, but these patients always had a leukocytosis of eight to ten thousand, which is the reverse of influenza. The whole thing is up in the air, but Dr. Waters has described an epidemic which is the first of the kind to be described by physicians in Indiana, he has done it with limited facilities, and has given data which will compare favorably with data collected by trained experts. It is evident that there are many epidemics of jaundice, and not only are the doctors of Indiana overlooking it, but the doctors of Ohio, where no such epidemics have been recorded. Since it is common in New York and Pennsylvania, I assume that it is common in the adjoining states but has not been reported.

Dr. Waters deserves considerable commendation for the way in which he has described it. His conclusions in reference to the disease are worthy of consideration.

DR. W. A. FANKBONER (Marion): It has been a question in my mind whether this disease is not a post-war condition, as is the epidemic type of encephalitis. It is very evident in the study of this type of encephalitis that it is a post-war condition. It followed in Europe the lines of transportation and spread very largely along lines of transportation, and after the world war was widely epidemic. It seems just as reasonable to suppose that this travel factor may be operative in the spread of epidemic jaundice. The most practical working hypothesis is that it is an air-borne disease, the invisible vapor that is coughed out or sneezed out carrying the infection, keeping in mind also the matter of direct contact. It is pretty well determined that epidemic encephalitis is so transmitted, although it gives no evidence of the high degree of sensitivity that Dr. Waters has shown us in epidemic jaundice. It is just as

reasonable to decide that an infection of the upper air passages can localize itself about the bile apparatus as it is to accept the well-established fact of other selective localization of infections.

DR. W. W. WADSWORTH (Minnie): Dr. Waters' paper is a valuable study and shows close observation, analysis and classification of the varied phenomena through which these cases passed from onset to resolution. He has given us a fine example of student quality in his report on epidemic jaundice.

Just a word as to the communicability of this infection. It has been contended that epidemic jaundice, like epidemic encephalitis, is of unproven origin and indefinite contagion. However, it has been assumed that its transference is through association or individual contact. It may therefore be assumed that in a small community the victims of the epidemic were more or less closely associated. Did not the children attend the same schools, Sunday-schools and churches? Is it not reasonable that this infection, like that of kindred epidemics, is through respiratory contact?

PRESUMPTIVE TEST FOR THE ETIOLOGIC FACTOR IN BACTERIAL FOOD POISONING

Victor Burke and Charles W. May, Pulman, Wash. (*Journal A. M. A.*, Nov. 11, 1922), have devised a rapid test for the etiologic factor in bacterial food poisoning, of such a practical nature as to be readily applied by the practicing physician lacking access to a diagnostic laboratory. The test consists of a rapid, confirmed test for the toxin of *Clostridium botulinum* (*B. botulinus*) combined with a slower presumptive test for organisms of the paratyphoid-enteritidis group. There is also described a rapid presumptive test for the presence of botulinus toxin which may be used when botulinus antitoxin is not available. The application of this test in a recent outbreak of botulism, with the resulting diagnosis and case history, is included. In testing to determine the presence and nature of the poisonous substance in a jar of canned asparagus, 2 c.c. of the unfiltered asparagus liquor was placed in each of five serum tubes. To the asparagus juice in the second tube was added 1 c.c. of Type A botulinus antitoxin. To the third tube was added 1 c.c. of Type B botulinus antitoxin. The fourth tube was placed in boiling water for ten minutes. To the fifth tube was added 0.5 c.c. of a 10 percent solution of hydrochloric acid, which was allowed to stand ten minutes. The contents of all five tubes were then neutralized to litmus with a saturated solution of sodium bicarbonate. The contents of each tube were then injected into the marginal ear vein of a

DR. CHARLES A. SELLERS (Hartford City): From an etiological standpoint, I believe we were all in agreement that anterior poliomyelitis did follow our lines of greatest travel. I believe acute epidemic jaundice will do the same thing. In the year 1915 we had an epidemic of jaundice that limited itself to the school children. At that time we had opened up a new swimming pool in our high school. The English had to close their bathing pools during the Boer War because of epidemic jaundice.

DR. S. C. WATERS (closing): The Epileptic Village that lies within the affected area had fifty cases of jaundice during the epidemic. Only inmates were attacked. These use tin cups for drinking purposes. The attendants, who use glasses, escaped. You can draw your own conclusions.

All the epidemics I have heard or read of have occurred during the months of October, November, December and January, so this is the time of year to be on the lookout for it.

medium sized rabbit. The results obtained indicate that the asparagus contained a botulinus Type A toxin.

LEUKOPLAKIA BUCCALIS

H. H. Hazen and F. J. Eichenlaub, Washington, D. C. (*Journal A. M. A.*, Oct. 28, 1922), report ten cases which illustrate that syphilis represents an accidental rather than a causative factor in this disease. The use of tobacco is not necessarily a factor. Rough teeth, by causing mechanical irritation, inaugurate the disease in the vast majority of cases. Etiologically, leukoplakia is analogous to keratosis of the skin, in that the former is a defense reaction against mechanical irritation in the mouth, the latter a defense reaction against the actinic rays or mechanical irritation, or both, on the skin. Each develops as a result of functional overactivity. These cases are extremely rebellious. They tend to remain stationary or gradually to progress over a period of months or years. They are distinctly precancerous. Antisyphilitic treatment is of no avail, and need not be considered in the treatment. Some of the earlier cases will clear up if the source of irritation is removed. As tobacco is undoubtedly a very important factor, its use should be interdicted. If the cases are very extensive and severe, no treatment is likely to avail, even radium being useless. In the authors' hands, the best agent has been the cautery. This is used at red heat, with local anesthetic. With a little experience one can learn to burn deep enough to destroy all leukoplakia, and yet leave a functioning membrane.

**THE JOURNAL
OF THE
INDIANA STATE MEDICAL ASSOCIATION**

Devoted to the Interests of the Medical Profession of Indiana

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Editor and Manager

Office of Publication, 406 W. Berry St., Ft. Wayne, Ind.

DECEMBER 15, 1922

EDITORIALS

OUR HOLIDAY MESSAGE

THIS December number of *THE JOURNAL* comes at the close of another year. To many it has been a year attended with accomplishments that mean satisfaction with individual effort, while to others it means the closing of a year that has been attended with failure to attain the results desired. However, with the beginning of the new year we have a right to look forward with optimism concerning what is in store for us in the future providing we begin the year with a determination to win in all of our legitimate undertakings, and it is but a laudable ambition to desire to forge ahead in the struggles that fall to the lot of everyone who has success as his goal. During the last few years the whole world has been in a restless, unsettled condition, and this has been felt in the United States as well as in Europe. There seems to be an undercurrent of opposition or antagonism to the established order of things. This feeling is felt in politics, religion, business affairs, and even in the practice of medicine. The public seems to be bent upon chasing rainbows in efforts to secure relief from disease conditions, and in consequence the educated and well trained doctor sees many of his best patients, for no reasonable or logical cause, seeking relief at the hands of various brands of rubbers or kneaders and wily faith healers of one kind or another. A little sober thought and analytical reasoning on our part will show us that right always prevails in the end, and since the days of Hypocrates there have been many forms of quackery and many kinds of pseudo-medical cults that have sprung up, thrived for a time and then died, whereas the regular practice of medicine has continued to live and every day grow in importance because of the progress that has been made and the great work that has been done for suffering humanity. There is, however, a time for introspection, and with the closing of this year and the dawn of a time when, through custom, good resolutions are made, why wouldn't it be a good idea for us to study our failures, and in particular any failure on our part in taking the public into our confidence in the dissemination of knowledge

as to our aims, objects and accomplishments? If we have failed to do our part in protecting the public from the delusive teachings and practices of the quacks and pseudo medical cults, and there is every evidence to show that we have failed in that respect, is it not a duty that we owe to ourselves as well as to the public to start a new order of things with the coming year to the end that truth will prevail? This will be realized at an earlier date than it will be if we are apathetic. Just as there is need for great reconstruction work in politics and business, so is there need for reconstruction work in our profession, to the end that the greatest good for the greatest number may be secured. We need a closer affiliation of medical men, a greater respect for the opinions of each other, and above everything else, a good deal more activity for the good of the many rather than for the individual himself. We need solidarity, and a unity of purpose in our medical organization, with every member working for the common good. We do not need any new ethics, but a strict adherence to the ethics that supposedly have governed medical men for a century. We need to cultivate to a greater extent a feeling of brotherly love, and we need also to adopt more rigid rules pertaining to the question of honesty and integrity in these times when commercial trickery and chicanery are so prevalent as a means of financial gain. In wishing the readers of *THE JOURNAL* a Merry Christmas and a Happy New Year, we also wish to express the hope that throughout the coming year the medical men will see as they have never seen before the necessity of joining hands in one solid phalanx in the fight for everything that is progressive, honorable and just in the practice of medicine. If we do this we not only shall accomplish great things for the public as well as for ourselves, but we will have the satisfaction of accomplishments that will merit the respect and approval of everyone and give the utmost satisfaction to each of us as individual physicians.

EXAGGERATED CLAIMS FOR MEDICAL PREPARATIONS

Doctors should be on their guard when accepting the claims of manufacturers concerning the curative or therapeutic effects of certain remedies that are offered for use of medical men, generally with very exaggerated claims as to virtue. It is perfectly natural that the manufacturers should attempt by every conceivable way to increase the sales of their products, and even though the literature that is sent out sometimes is temperate in statement, the traveling representatives often are quite the opposite and go to extremes in claiming all sorts of unpossessed virtues for the particular products that

they are introducing to the medical profession. Because these representations of both manufacturers and their representatives are so unreliable, no doctor is justified in putting faith in anything that is offered to him without learning something about the trustworthiness of the recommendations that have been made. This is where the Council on Pharmacy and Chemistry of the A. M. A. comes in and offers a service to the medical profession that is deserving of the greatest confidence. In fact, it is the only clearing house through which the medical profession is able to determine in an unbiased as well as perfectly trustworthy manner the virtues of all preparations that are offered to the medical profession for use in treating diseased or abnormal conditions of the human system. Unfortunately there are some doctors who seem to think that they do not need the advice and counsel of such a representative body of men as those composing the Council on Pharmacy and Chemistry, and it is because of this fact that manufacturers of untrustworthy pharmaceutical products are able to thrive and profit. One of the first questions asked concerning a new product should be whether it has been approved by the Council, and if so how far does the approval go in sustaining the assertions of the manufacturers. Oftentimes the first claims for a new product are sustained, but immediately upon having the product approved the manufacturers or their representatives begin to add to the claims to the extent that unpossessed virtues are given the product and in consequence the users are misled and imposed upon. There also is another phase of the question which has to do with extravagance of even legitimate claims concerning virtue. As a concrete example of this, we cite the case of mercurosol, broad claims for which in the treatment of syphilis have been made by the manufacturers. The claim has been put forth that mercurosol is a superior mercurial preparation and not only preferred, but more efficient than other mercurial preparations in the treatment of syphilis. In reality it seems to have been proven (Cole, Driver and Hutton in the *Journal of the A. M. A.*, November 25, 1922) that the results are not better than secured with the old and tried mercurials. In fact it has been shown that in a considerable percentage of instances the patients became worse following treatment with the drug, and some showed no improvement. It also comes very far from having the high spirocheticidal value which the printed data of its manufacturers claim. The effect on the Wassermann reaction over a short period of time was practically nil. The drug when given intramuscularly seemed to be moderately well tolerated, but not any better than red iodide of mercury. Intravenously, however,

in four of twenty-three patients, a sclerosis of the vein developed—this in spite of the claims that there is no deleterious action of the drug on the vein walls. In fact, the report seems to discredit most of the claims put forth by the manufacturers, and only goes to show that doctors should be skeptical about accepting the recommendations of the manufacturers of any remedy, and to rely more upon the opinion and recommendations of such an experienced and trustworthy body as the Council on Pharmacy and Chemistry.

POOR CALIFORNIA

The chiropractors of California, through an adroitly worded bill and a clever and misleading propaganda, appealed for an independent chiropractic licensing board to the sympathy and a lack of understanding on the part of the voters of the state, and at the election of November 7, under the initiative, they won. They carried along with them the struggling osteopaths, who were given an independent licensing board of their own. Now the people of California can have their back bones chiropractically analyzed and adjusted, and their inflamed appendixes osteopathically rubbed to the point of rupture, by any person whom the State Board of Chiropractic Examiners or the Board of Osteopathic Examiners of the state of California, as the case may be, sees fit under the law to set loose on the suffering community. The Board of Medical Examiners of the state of California is relieved from all duty and responsibility in the premises. The only evidence of state sanity from the medical standpoint in the California situation, as far as was disclosed by the recent election, was the defeat of the measure which aimed to prevent the use of living animals for research designed to advance medical science and the welfare of men and dumb animals.

What chiropractic is, the California law does not say. One licensed by the board of chiropractic examiners is authorized "to practice chiropractic in the state of California as taught in chiropractic schools or colleges; and, also to use all necessary mechanical, and hygienic and sanitary measures incident to the care of the body;" but his license does not authorize "the practice of medicine, surgery, osteopathy, dentistry or optometry, nor the use of any drug or medicine now or hereafter included in the *materia medica*." The law creating the board of osteopathic examiners omits altogether any definition of osteopathy, but provides that the board shall in respect to all matters relating to graduates of osteopathic schools, applying for or holding any form of certificate or license, take over, exercise and perform all the functions

and duties imposed on and heretofore exercised or performed by the board of medical examiners.

What a chiropractor and an osteopath may do under licenses issued by these new boards will doubtless be determined in the courts, if interested prosecuting officers can be found who will bring prosecutions in cases of apparent violation of the law. It is said that the chiropractors will be entitled to sign birth and death certificates, be health officers, and fill any official position connected with the practice of medicine and public health.—*J. A. M. A.*, Nov. 18, 1922.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

THE season's greetings to all!

PAY your medical society dues now while the matter is fresh in your mind.

WE learn that there are a few misguided members of the medical profession, probably bent upon making money no matter how they make it, who are disciples of one Dr. Abrams, of San Francisco, who has been in the limelight for the last few years as an exponent of a form of pseudo-medicine that is the rankest kind of fakery. To such we recommend the series of articles concerning the preposterous claims of Abrams that have appeared in the *Journal of the A. M. A.* under various dates and copy of which may be obtained by writing the Propaganda Department of the Association.

WITH the beginning of the New Year we hope that the various committees of the Indiana State Medical Association will begin to functionate if they have not done so already. We know that the legislative committee has been busy for some weeks, but what about the other committees? Of especial interest to the medical men of Indiana are the results that should be accomplished by the committee in Industrial and Civic Relations. We hope that that

committee will not be a committee in name only, but that it will do some real constructive work in the economic interests of the individual members of the association.

KNOWING Dr. Hurty as we do, we expect great things of him in educating the public concerning the aims and objects of scientific medicine. If he can impress the public through the newspapers and by word of mouth as he addresses lay audiences, as to what modern scientific medicine is and that the people need doctors as expert advisors just as they need electricians, engineers, architects and other technically trained men, and that fakirs and cults are dangerous because they are ignorant, he will accomplish much in the interest of better health and create a higher appreciation of the services of well trained medical men.

THE chiropractors are using full page illustrated advertisements to attract patients, but then that is no worse than what is done by certain supposedly ethical members of the regular medical profession who take up full pages in the photogravure sections of lay publications, or several pages in popular magazines. The chiropractors also are making use of some wonderful signs illuminated by varicolored electric lights, and in some places occupying almost the entire front of a building. Surely the members of the regular medical profession who are bent upon placing themselves before the public by means of advertising are not going to let the chiropractors get the best of them. Why not get up a contest and give a prize for the ones who can create the most attractive and best pulling advertising?

ON the first of the year the Indiana legislature will convene. We hope that the Indiana medical practice act may be strengthened to such an extent that law breakers, so far as pertaining to the practice of medicine, may be punished in a suitable manner. There will be those who will try to nullify the effect of the existing medical laws, and the pseudo-medical cults will try to secure legislation favorable to them which would in effect place the people in Indiana in a position whereby they will have no protection from incompetents. The legislative committee of our association has a great work to do in connection with these various legislative problems and we sincerely hope that every member of the Indiana State Medical Association will give this committee active support and this means not only moral support, but assistance in the way of time and money if called upon for such in order to work most effectively.

THE opticians of the country sponsored a "Better Vision Week" and gave the public, through newspapers and lectures before various societies, their ideas concerning the need of glasses. We have been rather amused to see the chiropractors take advantage of the situation by advertising boldly that chiropractic treatment will in many instances enable persons to do without glasses. Even Cancer Week was utilized by some chiropractors in advertising to the effect that chiropractic treatment tends to place the patient in a position to resist the ravages of cancer. The merits of advertising have been proved time and again, and no doubt there are plenty of gullible people who will believe what they see in advertisements, but we have been wondering why the various better business bureaus, and the national and local advertising clubs that have been having as their slogan "honesty in advertising," have not seen fit to place the stamp of disapproval upon misleading and delusive advertising of the pseudo-medical cults.

THE Religious Liberty Association of Indiana, Illinois, Wisconsin and Michigan, asks us to oppose the movement for Sunday law enforcement which it is thought would menace the freedom of the press. It is reported that the protestant churches are to go into politics for the purpose of and with the particular demand for the enforcement of a Sunday rest law, and that a state wide campaign is to be instituted in the State of Indiana.

We do not think that any great amount of force will be put into the contemplated move and for the reason that some of the most devoted members of the protestant churches would oppose such action. Not only is sectarian influence in State and municipal affairs objectionable, but our religious liberty is not to be tampered with. We do not believe any considerable number of people will sanction any attempt to regulate or influence the observation of religious duties or in any way interfere with what belongs to the conscience of each individual.

MANY doctors are members of churches and various organizations supported or sponsored by churches, and such doctors have a right to protest against the attitude of the various religious organizations that through their officers are upholding and actually working for some of the pseudo-medical cults. Some of the leaders in the Y. M. C. A. and Y. W. C. A. activities actually are "tooting" for chiropractors who at the present time are law breakers, to say nothing of being incompetents, yet these same ring leaders in Y. M. C. A. and Y. W. C.

A. work are soliciting endorsement and financial support from reputable members of the medical profession. We have no objection to the preferences shown by ministers, Y. M. C. A. or Y. W. C. A. secretaries, for legalized and reputable practitioners of medicine, but we do think that it is time for withdrawal of support of those religious workers when they not only uphold quackery, but actually work for quackery's advancement. If the church and various religious associations as organizations or through their officers are going to support the pseudo-medical cults and quackery, then it is time for the regular medical profession to withdraw its support from such organizations.

FEES splitting is a great game. As long as there are doctors who possess elastic or perhaps we ought to say no consciences, and the public does not interest itself in being stung, just so long will the iniquitous practice of fee dividing thrive. However, it is a little amusing to a rank outsider to note the howls of protest which go up from the old time fee dividers when they note that their "business" is slipping from them because rivals, usually younger and often without adequate training or experience, are getting the "business" because a larger commission is offered. Of course, the poor patients' best interests are not considered. In fact, the submissive patient with a mistaken notion concerning the solicitude of his family physician is led blindfolded and hobbled to the highest bidder, where he is made the object of the most mercenary transaction that it is possible to conceive. It is reported that one man has said: "I am going to get mine while the getting is good," but while all this is going on the medical profession as a whole is getting a black eye which it very justly merits. The innocent may suffer with the guilty, but at least they have the satisfaction of having a clear conscience, and we can not help but feel that even the grafters in the medical profession, in their own hearts, have very high respect for the men in the profession who are trying to be clean and honest.

PALMER, the high priest of chiropractic, is broadcasting by radio a talk on salesmanship as applied to chiropractic. It is a little amusing to hear him announce to chiropractors that their work is a business, and that it must be "sold" to the public by making everyone think that they can be benefited by chiropractic adjustments. On the other hand the public is told that the only way to get well is to seek chiropractic treatment, and the inference is drawn that every person can be made a little better by certain adjustments that only the chiropractor can give. Very naturally a lot

of people are going to take up with this "gold brick" proposition, and many will pay the penalty for being deluded by such specious argument, but the point of this incident is that the growth of the pseudo-medical cults and their popularity with the public is due entirely to such propaganda as is being spread broadcast by Palmer. What is the regular medical profession doing to offset this pernicious propaganda? It is quite true that the New York State Board of Health is doing a splendid work in giving daily and weekly health talks by radio, but there should be more such activity in every state in the union. In fact, the regular medical profession has a great educational work before it if the public is to be prevented from accepting such delusive information as is being put out through the propaganda of chiropractors and other pseudo medical cults.

THERE is something radically wrong in this country when the Standard Oil Company can declare a dividend of a hundred per cent and many other companies can declare dividends equal to or almost as large. Every corporation is entitled to a fair return upon money invested, and the return should provide for a reasonable surplus, but there is no excuse for such enormous profits. While we are thinking of profiteering and the evils resulting from trusts and combinations of capital let us not forget that some of the labor unions are limiting the number of apprentices in certain trades, and even in some instances barring the taking on of apprentices for periods of years, all with the idea of controlling the labor situation and forcing higher prices. Evidence has been produced to show that in New York City as well as in Chicago, plasterers have demanded and received wages and bonuses that netted the individual plasterer twenty-five to thirty dollars per day, with short hours for the day and no great amount of work accomplished during the day. It looks as though "all are doing it," though we haven't heard of any move on the part of the medical men to control the market for medical and surgical services, nor boosting the rates to a profiteering basis, and, worse than all, our government that we are called upon to bleed and die for if necessary, soaks the poor man, including the hard-working doctor whose earnings represent his individual effort, whereas big business and individuals having unearned income manage to escape to a very large extent. We do not believe in bolshevism, communism, or socialism, but we do believe that something should be done to equalize the burdens in this country.

TALK about Barnum humbugging the people and short change artists taking advantage of all who come their way, the chiropractors have both beaten a mile. The strange part of it is that supposedly reasonably intelligent people "fall" for such a humbug. Recently a young woman who had never worn glasses and needed appropriate lenses to correct a large error of refraction which was causing terrific headaches when the eyes were used for the close point, admitted that she had been treated by a chiropractor for several months in the belief that pain in the eyes was due to an impingement of nerves in the spinal column. A pair of glasses relieved her trouble, but the chiropractor capitalized his ignorance or knavery, or both, to the extent of over a hundred dollars, and the credulous patient pays the penalty. If these chiropractors had any knowledge of the fundamental branches of the science that deals with the human body in both health and disease, they would not be chiropractors. However, they do not have the time, ability or money to obtain such knowledge and they follow the alluring promises of the chiropractic leaders who frankly state that nothing more than a common school education and a few weeks training is necessary in order to become a chiropractor and that easy money awaits the one who begins chiropractic. The chiropractic leaders realize the force of Barnum's reputed statement that the public likes to be humbugged. The public certainly is humbugged when it takes up with chiropractic, for, generally speaking, there never was a more monumental fraud perpetrated upon the impressionable public, and the pity of it is that it is practiced upon the sick and suffering who deserve the best that can be obtained and, in their ignorance, should be protected by law.

THE Indiana legislature will be in session again next month. We shall be interested in knowing how many Indiana doctors are sufficiently interested in their own welfare to give any time or the slightest attention to the matter of legislation that will affect them. We venture to say that the chiropractors, the Christian Scientists, and the members of various other pseudo-medical cults have gone to considerable trouble to acquaint themselves with the attitude of the incoming legislators concerning subjects which directly or indirectly affect the practice of medicine or public health affairs. How many members of the Indiana State Medical Association have turned a hand in this direction? The time to do most of the work is before the legislature convenes and not wait until threatened legislation is about to pass the legislature and then leave it to a few men to frantically work to stem the

tide of adverse action. Why not get your coat off, Mr. Lazy Doctor, and do something? You are the fellow who will whine the loudest when the legislature passes something that interferes with your vocation and be detrimental to the welfare of the public as well. Pure selfishness and a desire to improve your economic and social position ought to impel you to get busy, even if you haven't the spirit in your heart to work for what you know to be right and just for your fellow men. Quackery of every description is harmful as well as dishonest, and there should be some means of curbing or suppressing it. You recognize this fact and yet you inwardly nurse the feeling that if you do not stir yourself someone else will, and thus the work that is of benefit to you will be done by someone else. That is the wrong attitude. Don't adopt the slogan, "Let George do it," but get busy yourself.

THERE is ample evidence to show that the Christian Scientists are hooked up with the pseudo-medical cults, the American League for Medical Freedom, the Anti-Vaccinationists, the Anti-Vivisectionists, and all the other sects and organizations that are fighting scientific medicine. The Christian Scientists and the chiropractors put up a strenuous fight to defeat Dr. J. N. Hurty from being elected to the Indiana legislature but they were unable to accomplish the desired result. These two cults, partners in efforts to retard progressive medicine, sent out circulars to the faithful, and to others thought to be susceptible, asking that Dr. Hurty be "swatted" at the polls. Verily, politics make queer bedfellows. However, organized medicine has received so many hard jolts as a result of just such work as done by the combination of chiropractors and the Christian Scientists that it is time for medical men to wake up to the realization that no matter how virtuous and just our cause, it requires political activity like that put forth by the chiropractors and the Christian Scientists to gain anything, and while Dr. Hurty won out, largely through his personal popularity, yet we have no reason to lie down on the job and conclude that we always are going to be so fortunate. Our advice to every doctor in Indiana is to get into politics, no matter whether such action is liked or not. By this we do not mean the rotten politics which some of our adversaries stoop to, nor do we mean partisan politics. We do mean the kind of politics which carries influence and education to the voters as well as to the candidates for office. If the medical men of Indiana would unite solidly in putting forth its influence for better legislation concerning medical and public health matters, there is nothing within reason that they could not secure.

"How to Increase Your Practice and Your Income" is the slogan adopted by some manufacturers of physician's equipment, especially those making devices for the use of electricity or mechano-therapy in the treatment of patients. Evidently some manufacturers are not only tinctured with the idea that for the most part doctors are gullible, but that they are also dishonest, for when soliciting the business of physicians the special plea is made that "few patients coming to the doctor's office are not benefited by daily treatments with electricity or some form of mechano-therapy, and think what that means at one to three dollars per treatment!" Could anything be more alluring? The doctor who "falls" for such "rot" certainly has an elastic conscience if he is not plainly dishonest from head to foot. In reality the doctors who take up with such a proposition deserve no more confidence than the chiropractors who use mechano-therapy for everything and usually stick to it until all the patient's money is gone or the patient becomes satisfied that no benefit is being secured. It is quite possible that many people will be willing to be humbugged by such chicanery, as is evidenced by the fact that a well-to-do family permitted a chiropractor to knead and pommel a child for nearly a year to cure the youngster of the effects of obstructed breathing from enlarged tonsils and an enormous bunch of adenoid tissue in the nasopharynx, and at the end of a year, and after an expenditure of several hundred dollars, the fond parents were told that "all you have to do is to continue the treatment for about six months longer and your child will be cured." What intelligent and conscientious doctor will take up with practices allied to those of the chiropractor and do it because he can increase his practice and his income?

ARTHUR BRISBANE, a well known writer, contributes a feature article every day to a syndicate of newspapers. These articles touch upon every conceivable topic and for the most part are very interesting and the comments pertinent. He has made a justifiable plea for people of all classes to consult a reputable physician when they are sick, and he takes a rap at the anti-vivisectionists and anti-vaccinationists by declaring that to animal experimentation we owe much of our definite knowledge concerning anatomy, physiology and the nature and cause of many diseases, and that we will have smallpox with all of its disastrous results as long as people fail to take advantage of vaccination as a preventive measure. He also has taken occasion to comment upon wonderful specific effects of antitoxin in the treatment of diphtheria, and to remind the public that as a

result of typhoid vaccination, typhoid was practically unknown in the last great war whereas in all previous wars it was one of the greatest scourges contended with. Recently he has mentioned the effect of a new remedy made from the pancreas of a pig which is reputed to be a cure for diabetes. He even goes so far as to recommend that if those who are suffering from diabetes can not obtain from their physicians the desired information concerning this new treatment, that application should be made to the superintendent of the New York hospital in New York city. While some may say that Mr. Brisbane is overenthusiastic in some of his opinions and contentions, yet the fact remains that he does appreciate the fact that all information and all recommendations should come from trustworthy sources and in this respect he recognizes that the reputable, educated and well trained scientists are the ones in whom to place dependence. Undoubtedly Mr. Brisbane, as a noted and popular writer, is doing much to educate the public concerning health problems, and we are very much pleased to note that up to this time he seems to have discussed these subjects in a consistent and rational way.

WHEN we analyze some of the uplift schemes and study the motive which prompts the chief uplifters to interest themselves in such schemes, we usually find that back of the whole enterprise is a personal ambition to be served, or some object which is entirely foreign to the altruistic spirit which the uplifters try to make out as the cause of the activity. This is evidenced by the large number of national societies that have the same or similar objects as a reason for their existence, all more or less at loggerheads, each and every one dominated by a few individuals aspiring for leadership and prominence, and very naturally each overlapping the work of some others. Even the get-rich-quick schemes are of minor importance as compared to various schemes for curing disease or promoting health. The trouble with most charitable and philanthropic organizations is that they do not distinguish between philanthropy and the practice of confiscation of professional service, and in nearly all of these uplift schemes which have to do with health or disease is the medical man who is called upon to donate his knowledge and services. These uplifters who apparently are so solicitous for the welfare of the human race seem to forget that a doctor's professional knowledge and service are just as much his stock in trade as the grocer's foodstuffs or the dry goods man's fabrics. People suffer from preventable diseases every day, of course, and those diseases ought to be prevented. People

also suffer from lack of food and from lack of clothing, and those conditions ought to be relieved, but the most rabid philanthropist who does not hesitate to take a doctor's services without any compensation at all would never dream of going into a grocery store or dry goods store and helping himself or herself on the plea that people were hungry or naked. As one of our medical friends tersely puts it, "The doctor very foolishly has permitted himself to be put in a position where he is giving away the most valuable part of his knowledge and services, and he is trying to make a living on the rest which is constantly diminishing." Naturally he is beginning to feel the pressure and to squeal. Sometimes his resentment takes the form of objection to public health plans. This is unwise, because public health work in its true sense is going to go on and we can't stop it. What he should object to is the constant effort to promote public health plans at the expense of the profession and to insist that whenever professional services are furnished that they shall be paid for at a reasonable rate. The fact that this is service rendered to the public does not in any way justify the exploitation of the medical profession. Lawyers, of course, learned this centuries ago, and every legal service that a lawyer renders to the people, either as an individual or as an official, is well paid. Doctors had no services which they could render the people until present day public health knowledge developed, and they weren't wise enough on the start to insist upon proper compensation. There are two principles that should be adopted as slogans of the A. M. A. and every medical society in the country. The first is: "All medical work shall be done by medical men" and the second, "All medical work shall be adequately compensated."

DEATHS

WILLIAM Y. WELLS, M. D., died November 10, at his home in Laketon. He graduated from the Indiana Medical College, Indianapolis, in 1873.

T. B. RITTER, M. D., of Orleans, died October 27, aged 71 years. He was a member of the Orange County Medical Society and the Indiana State Medical Association.

WILLIAM H. BUTLER, M. D., died in Richmond, November 17. Dr. Butler graduated from the Medical College of Indiana, Indianapolis, in 1879, and was a member of the Bartholomew County Medical Society and the Indiana State Medical Association.

FRANK C. HESS, M. D., of Cadiz, died November 11, aged sixty-six years. Dr. Hess graduated from the Medical College of Ohio, Cincinnati, in 1881. He held membership in both the Henry County Medical Society and the Indiana State Medical Association.

JOSEPH L. PRESTON, M. D., of Cloverdale, died October 24, at the age of 71 years. He graduated from the Indiana Medical College, Indianapolis, in 1877. Dr. Preston was a member of the Putnam County Medical Society and the Indiana State Medical Association.

ALBERT MAY, M. D., of Crothersville, died November 10, at the age of seventy-six years. Dr. May graduated from the University of Louisville, Medical Department, in 1875. He was a member of the Jackson County Medical Society, and the Indiana State Medical Association.

JOHN N. RECORDS, M. D., died at his home at Franklin, Indiana, November 14, at the age of sixty years. Dr. Records graduated from the University of Louisville, Medical Department, in 1894, and was a member of the Johnson County Medical Society and the Indiana State Medical Association.

ROBERT E. MARSHALL, M. D., of Elwood, died at an Indianapolis hospital, November 5, following an operation, at the age of forty-seven years. Dr. Marshall graduated from the Central College of Physicians and Surgeons, Indianapolis, in 1903. He was a member of the Madison County Medical Society and the Indiana State Medical Association.

WARREN D. CALVIN, M. D., 55 years of age, died suddenly on December 6 at his home in Fort Wayne following an attack of angina pectoris. Dr. Calvin was born near Bryan, Ohio, in 1867. He received his medical education from Rush Medical College, Chicago, from which institution he graduated in 1895, locating in Fort Wayne two years later, where he has resided continuously since that time. Dr. Calvin served in the World War with the rank of captain. He was always active in local civic and medical affairs, and at the time of his death was councilor for the Twelfth District Medical Society. He was a member of the Fort Wayne Medical Society, Indiana State Medical Association, Mississippi Valley Medical Association, and American Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION. Patronize these advertisers, for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

DR. ELLA A. HOLLIS, of Hartford City, has gone to Santa Barbara, California, where she will spend the winter.

DR. OSCAR T. SCAMAHORN, of Pittsboro, was elected president of the Seventh District Medical Society at a meeting held in Indianapolis, November 2.

THE DeKalb County Medical Society held a meeting in Auburn November 2. A paper was presented by Dr. C. S. Stewart, the subject being "Deafness."

DR. WILLIAM G. SYMON and Miss Neva Klingler, both of Garrett, were married November 3 at Peru. Dr. Symon is a member of the clinic staff at Garrett.

THE Madison County Medical Society held a meeting at Anderson, November 21. Dr. Charles Moon, of Indianapolis, presented a paper on Social Diseases.

THE Shelby County Medical Society held a meeting at Shelbyville, November 15. A general discussion of cures for cancer formed the main part of the program.

DR. EUGENE L. BULSON of Fort Wayne has been spending the past two months in the east, where he has been doing post-graduate work in eye, ear, nose and throat.

INDIANA ranks tenth in the number of cancer deaths during 1921 in the various states, according to a chart prepared by the government to be used in the observance of Cancer Week.

THE Gibson County Medical Society held a meeting at Princeton, November 13. The program consisted of a general discussion of Bright's disease and meningitis.

THE Clinton County Medical Society held a meeting at Frankfort, November 2. Dr. A. G. Chittick presented a paper on the subject of "Advantages and Disadvantages of Group Practice."

DR. CHARLES P. EMERSON, of Indianapolis, was re-elected a member of the national committee for mental hygiene at the thirteenth annual meeting of the committee held recently in New York city.

WORK has been started on the erection of the Shrine Crippled Children's hospital at St. Louis. The hospital will consist of a three-story administration building, with two ward buildings, each two stories high, having room for eighty ward beds.

THE officers of the American College of Surgeons who were elected at the annual meeting are: President, Dr. Albert J. Ochsner, Chicago; First Vice-President, Dr. Lincoln Davis, Boston; Second Vice-President, Dr. John George McDougal, Halifax.

THE medical societies of DeKalb, Steuben, Lagrange and Noble counties met in a joint session at the Community building in Kendallville, November 23. Dr. Craig, of Chicago, delivered an address. Plans were made to organize under the name of the Northern Indiana Medical Society.

THE Wabash County Medical Society held a meeting November 16, at Wabash. A paper was presented by Dr. G. T. Biggerstaff on "Protective Social Measures in Specific Diseases," and a paper by Dr. G. M. LaSalle on "Relation of Infected Teeth to Other Infections" also was presented.

THE annual session of the Indiana Academy of Ophthalmology and Otolaryngology is to be held at Claypool Hotel, Indianapolis, Jan. 17 and 18, 1923. An interesting program has been prepared. Dr. D. O. Kearby, of Indianapolis, is president and Dr. Bernard J. Larkin, of Indianapolis, is secretary.

THE LaPorte County Medical Society held a meeting at Michigan City, November 9. Dr. T. Howard Plank, of Chicago, presented a paper on "High Frequency Currents in Treating Malignancies." Dr. Frank J. Novak, of Chicago, presented a paper on "Surgical Diathermy and Its Possibilities."

THE Fifth District Medical Society held a meeting November 14 at Terre Haute. The following officers were elected: Dr. J. F. Smith, Brazil, president; Dr. A. E. Rhein, Rosedale, vice-president, and Dr. Charles Wyeth, Terre Haute, secretary. Dr. William A. Jenkins, of Louisville, presented a paper.

THE following places in Indiana are without physicians at the present time: Liberty Center, Wells county; Dunreith, Hancock county; Mays, Rush county; Bippus, Huntington county, has one who wants to get away; Inwood,

Marshall county; Ame and St. esville, Hendricks county; Needham, Johnson county, has one, but another is desired, and Milhausen, Decatur county.

THE militia bureau of the War Department has allotted to Indiana the organization of a medical supply section, a medical laboratory section and a headquarters medical regiment, all to be units of the 113th medical regiment. With the exception of two hospital companies, all of the units of the regiment will be in Indiana. Headquarters of the regiment probably will be in Indianapolis.

THE St. Louis (Missouri) Medical Society has purchased ground on Lindell Boulevard adjoining Moolah Temple, where the commercial exhibits and registration bureau were located during the recent session of the American Medical Association. The ground, 150 feet square, was purchased at a cost of \$22,500; this sum has been contributed by forty-five members, each paying \$500.

THE Thirteenth Annual Meeting and Luncheon of the National Committee for Mental Hygiene was held at the Pennsylvania Hotel, New York City, on November 9th. Addresses were made by Dr. Haven Emerson, Professor Stephen P. Duggan and Mr. John J. Carty, of New York, Professor Elton Mayo, of the University of Queensland, Australia, and Dr. F. N. Williams, Medical Director of the National Committee.

THE National Board of Medical Examiners announces the following dates for its next examinations: Part I, February 12, 13 and 14, 1923; Part II, February 15 and 16, 1923. The fees for these examinations have been continued at the reduced rate for another year. Applications for these examinations must be forwarded not later than January 1, 1923. Application blanks and circulars of information may be obtained from the Secretary of the National Board, Dr. J. S. Rodman, Medical Arts Building, Philadelphia, Pa.

DURING November, the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Non-official Remedies: Lederle Antitoxin Laboratories, Mercurialized Serum-Lederle for Intravenous Use; Charles Leich & Company, Sulfa-senol; Mallinckrodt Chemical Works, Barium Sulphate Pure-M. C. W.; H. A. Metz Laboratories, Benzosol; Parke, Davis & Company, Silvol. Arsenobenzol (Dermatological Research Laboratories) and Arsphenamine (Dermatological Research Laboratories): These products are now marketed by the Abbott Laboratories

as Neoarsphenamine-D. R. L. and Arsphenamine-D. R. L. The Council has continued the acceptance for New and Nonofficial Remedies under these names.

THE medical profession will be interested in the announcement that the Abbott Laboratories of Chicago have purchased the Dermatological Research Laboratories of Philadelphia.

It will be remembered the Dermatological Research Laboratories were the first in the United States to produce Arsphenamine during the war when there was such a scarcity of this article; and these laboratories became well known to the medical profession for their patriotic attitude in developing and manufacturing medicinal preparations in this country. By this purchase of the "DRI" products, the Abbott Laboratories inherited their prestige.

The Abbott Laboratories acquired control of the Dermatological Research Laboratories on November 1st; and are continuing to operate them in Philadelphia under the direction of Dr. Geo. W. Raiziss, head of the department of chemistry, and his corps of specially trained assistants. Orders for "DRI" products will be promptly filled from the Philadelphia Laboratories or from their branches or distributors.

DURING the year 1921 the Rockefeller Foundation continued a quarter-million annual appropriation to the School of Hygiene and Public Health, of Johns Hopkins University; pledged two million to Harvard for a school of health; contributed to public health training in Czecho-Slovakia, Brazil, and the United States; aided the Pasteur Institute of Paris to recruit and train personnel; promoted the cause of nurse training in America and Europe; underwrote an experimental pay clinic in the Cornell Medical School; formally opened a complete modern medical school and hospital in Pekin; assisted twenty-five other medical centers in China; promised a million dollars for the medical school of Columbia University; contracted to appropriate three and one-half millions for the rebuilding and reorganization of the medical school and hospital of the Free University of Brussels; made surveys of medical schools in Japan, China, the Philippines, Indo-China, Straits Settlements, Siam, India, Syria and Turkey; supplied American and British medical journals to 112 medical libraries on the continent; supplemented the laboratory equipment and supplies of five medical schools in Central Europe; defrayed the expenses of commissions from Great Britain, Belgium, Serbia and Brazil; provided 157 fellowships in hygiene, medicine, physics and chemistry, to representatives of eighteen countries; continued a campaign against yellow fever in Mexico,

Central and South America; prosecuted demonstrations in the control of malaria in ten states; co-operated in hookworm work in nineteen governmental areas; participated in rural health demonstrations in seventy-seven American counties and in Brazil, neared the goal of transferring to French agencies an anti-tuberculosis organization in France; provided experts in medical education and public health for counsel and surveys in many parts of the world, and rendered sundry minor services to governments and voluntary societies. These were done in part by the Foundation directly, but chiefly through its departmental agencies—the International Health Board, the China Medical Board, and the Division of Medical Education.

SOCIETY PROCEEDINGS

District	Councilor	Counties	COUNCILORS' MEMBERSHIP CONTEST			Percent
			Number of Memberships	1921 ships to Date	1922 Member- ship	
First.....	Dr. Willis	7	176	175	175	.99
Second.....	Dr. Smadel	7	149	148	148	.99
Third.....	Dr. Leach	9	130	118	118	.90
Fourth.....	Dr. Osterman	10	138	137	137	.99
Fifth.....	Dr. Weinstein	5	158	166	166	1.05
Sixth.....	Dr. Spilman	8	150	161	161	1.07
Seventh.....	Dr. Earp	4	425	449	449	1.05
Eighth.....	Dr. Conrad	5	172	169	169	.98
Ninth.....	Dr. Moffitt	10	253	256	256	1.01
Tenth.....	Dr. Shanklin	5	151	147	147	.97
Eleventh....	Dr. Black	6	191	194	194	1.02
Twelfth....	Dr. Calvin	8	241	247	247	1.02
Thirteenth....	Dr. Berteling	8	274	259	259	.95
			92	2608	2626	

MUNCIE ACADEMY OF MEDICINE

The regular meeting of the Muncie Academy of Medicine was held in the Roberts Hotel, Friday evening, November 17th.

Dr. E. R. Hiatt, of Pennville, read a paper dealing with "Medical Ethics and the Laity". He said in part:

My plea is for an honorable and far-reaching system of propaganda for reform in the relation of doctor and patient.

We are now feeling the pressure of an agitation for further requirements for the surgeon and other specialists. Such requirements are fitting and proper, but I feel that the practical application of medical science to our population as patients has not kept pace with the advance of medical standards required for the physician. Instead of constantly thinking up additional requirements and restrictions for him, why not make more effort to lead the public to appreciate the meaning of these requirements and to give due respect to their fulfillment?

University graduates and persons otherwise intelligent fall for the medical quack and the chiropractor. Many men of pleasing personality, with meager medical training and void of conscience, have become "successful" physicians, and by their huckstership, inuendos or perhaps a mere shrug of the shoulder or facial expression when the opportunity presents itself, may influence his patrons, who seldom can gauge the ability and skill of the physician, against the trained and honest practitioner. Many times the renegade member of the profession is more of a menace than the blatant quack or pretender who may be a specialist in diseases of the skin and all of its contents.

Simple facts concerning epidemiology and hygiene should be understood by the public so there would be no excuse for them to fluctuate between the diversity of opinions preached by cults and faddists. No

matter how silly some of these opinions may appear to us, the laity is seldom competent to judge between fact and fiction, neither are they able to distinguish the good doctor from the bad. Many dishonest physicians are careful to meet all their financial obligations promptly and maintain a reputation for honest dealing, yet are grossly unscrupulous when the good name of their fellow physician is at stake.

I believe the public should have real education along the lines of ethics, general aims of the medical profession, public health matters, the fallacy of the quack cults, and a course of study enabling them to recognize a well trained physician.

My idea would be to have a central committee, preferably appointed by the A. M. A., prepare bulletins once a month at least, for distribution to local medical societies all over the United States, in quantities that the individual societies may deem wise to order. A mailing list could be compiled and a copy of the bulletin sent to every family. The subject matter could be carried by the local newspapers, as paid advertising if necessary. The cost of the work done by the central committee could be borne by the national society.

This would prove a powerful influence toward elevating the standards as well as the standing of the medical profession.

H. D. FAIR.

TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

TETANUS ANTITOXIN, PURIFIED.—A tetanus antitoxin, concentrated (New and Nonofficial Remedies, 1922, p. 281), that is also marketed in syringe containers of 10,000 units. E. R. Squibb & Sons, New York.

STAPHYLOCOCCUS VACCINE.—This product (New and Nonofficial Remedies, 1922, p. 306) is marketed in packages of four syringes containing, respectively, 100, 250, 500 and 1,000 million killed Staphylococcus aureus and Staphylococcus albus in equal proportion; in packages of four ampules containing, respectively, 100, 250, 500 and 1,000 million killed Staphylococcus aureus and albus in equal proportion (with a syringe); and in vials of 5 Cc., 10 Cc., and 20 Cc., each cubic centimeter containing 5,000 million killed Staphylococcus aureus and Staphylococcus albus in equal proportion. E. R. Squibb & Sons, New York.

STREPTOCOCCUS VACCINE.—This product (New and Nonofficial Remedies, 1922, p. 308) is marketed in packages of four syringes containing, respectively, 100, 250, 500 and 1,000 million killed streptococci; in packages of four ampules containing, respectively, 100, 250, 500 and 1,000 million killed streptococci (with a syringe) and in vials of 5 Cc., 10 Cc. and 20 Cc., each cubic centimeter containing 1,000 million killed streptococci. E. R. Squibb & Sons, New York.

TYPHOID VACCINE.—This product (New and Nonofficial Remedies, 1922, p. 310) is marketed in packages of four syringes containing, respectively, 100, 250, 500 and 1,000 million killed typhoid bacilli; in packages of four ampules containing, respectively, 100, 250, 500 and 1,000 million killed typhoid bacilli (with a syringe); and in vials of 5 Cc., 10 Cc. and 20 Cc., each cubic centimeter containing 1,000 million killed typhoid bacilli. E. R. Squibb & Sons, New York.

TYPHOID VACCINE COMBINED, IMMUNIZING.—A typhoid vaccine (New and Nonofficial Remedies, 1922, p. 310) that is marketed in packages of three syringes, one containing 500 million killed typhoid bacilli and 375 million each of killed paratyphoid A and paratyphoid B bacilli, and each of the other two syringes containing 1,000 million killed typhoid bacilli and 750 million each of killed paratyphoid A

and paratyphoid B bacilli; in packages of three ampules containing, respectively, the same dosages as the three-syringe package (with a syringe); in packages of 30 ampules, hospital size; and in vials of 5 Cc., 10 Cc. and 20 Cc., each cubic centimeter containing 2,500 million killed bacilli. E. R. Squibb & Sons, New York.

STAPHYLO-ACNE VACCINE.—A mixed bacterial vaccine (New and Nonofficial Remedies, 1922, p. 314) that is marketed in packages of four syringes, the first containing a mixture of 50 million each of killed staphylococcus albus, or killed staphylococcus aureus and of killed acne bacilli, the second containing a mixture of 125 million each of killed staphylococcus albus, of killed staphylococcus aureus and of killed acne bacilli, the third containing a mixture of 250 million each of killed staphylococcus albus, of killed staphylococcus aureus and killed acne bacilli, the fourth containing 500 million each of killed staphylococcus albus, of killed staphylococcus aureus and of killed acne bacilli; in packages of four ampules containing the same dosages as the four-syringe package (with a syringe); and in vials of 5 Cc., 10 Cc. and 20 Cc., each cubic centimeter containing 1,500 million killed bacteria. E. R. Squibb & Sons, New York.

COLON VACCINE.—A colon bacillus vaccine (New and Nonofficial Remedies, 1922, p. 299) that is marketed in packages of four syringes containing, respectively, 100, 250, 500 and 1,000 million killed bacilli; in packages of four ampules containing, respectively, 100, 250, 500 and 1,000 million killed bacilli (with a syringe); and in vials of 5 Cc., 10 Cc. and 20 Cc., each cubic centimeter containing 5,000 million killed bacilli. E. R. Squibb & Sons, New York.—(*Jour. A. M. A.*, Nov. 4, 1922, p. 1609).

BARIUM SULPHATE PURE.—M. C. W.—A brand of barium sulphate for roentgen-ray work—N. N. R. (see New and Nonofficial Remedies, 1922, p. 62). Mallinckrodt Chemical Works, St. Louis.

BENZOSOL.—A brand of guaiacol benzoate—N. N. R. (New and Nonofficial Remedies, 1922, p. 92). H. A. Metz Laboratories, Inc., New York.

NORMAL HORSE SERUM.—P. D. & Co.—This product (New and Nonofficial Remedies, 1922, p. 278) is marketed in packages containing one 10 Cc. syringe container (Bio. 50); in packages containing one 10 Cc. rubber stoppered bulb (Bio. 52), and in packages containing one 30 Cc. rubber-stoppered bulb (Bio. 53). Parke, Davis & Co., Detroit.

RABIES VACCINE (CUMMING).—An antirabid vaccine (New and Nonofficial Remedies, 1922, p. 290). The virus is prepared by dialyzing a 1 percent suspension of brain tissues (from a rabbit dying of rabies induced by an injection of fixed virus) against running distilled water until the active virulent virus is destroyed. The treatment is divided into two classes: Mild, requiring 14 doses; severe, requiring 21 doses. One dose, 2 Cc., is given daily over a period of either 14 or 21 days. Each package (Bio. 440) consists of seven syringe containers of 2 Cc. each (1 dose). Parke, Davis & Co., Detroit.

SULFARSENOL.—**SCYPHARSPHENAMINE.**—Chemically, sulfarsenol is closely related to neoarsphenamine. It contains from 18 to 20 percent of arsenic. The arsenic content of three parts of sulfarsenol is approximately equal to two parts of arsphenamine. The actions, uses and dosage are essentially the same as neoarsphenamine, but it is claimed to have the advantage over neoarsphenamine in that its solutions are more stable and in that it may be administered subcutaneously. Sulfarsenol is marketed in ampules containing, respectively, 0.06 Gm., 0.12 Gm., 0.18 Gm., 0.24 Gm., 0.30 Gm., 0.36 Gm., 0.42 Gm., 0.48 Gm., 0.54 Gm., 0.60 Gm. Chas. Leich & Co., Evansville, Ind.—(*Jour. A. M. A.*, Nov. 18, 1922, p. 1767).

PROPAGANDA FOR REFORM

ABRAM'S "OSCILLOCLAST".—This is a piece of electrical apparatus which is said to produce vibrations of varying rate. Its use is based on Abram's theory that "specific drugs possess a like vibratory rate as the diseases for which they are effective". Instead of using a drug one starts the "Oscilloclast" going, moves the indicators to the number corresponding to the vibration rate of the indicated drug and applies the instrument to the sufferer who, it is alleged, then gets the therapeutic action of the drug in question. The "Oscilloclast" is not for sale. It may be leased (for about two hundred dollars) on signing a contract that the instrument will not be opened. Within the past few months Abrams has been making bids for osteopathic patronage. The followers of the cult have not been slow to respond. The lure of the dollar and the bizarre is irresistible. Many of the lessees of the "Oscilloclast" are individuals who for years have lived in what may be called the twilight zone of professionalism where it is difficult to distinguish between the visionary with a fad and the quack or near-quack with a scheme.—(*Jour. A. M. A.*, Nov. 4, 1922, p. 1626).

CAROID.—This is a preparation of papain (obtained from papaya). Caroid was first marketed by the American Ferment Co. and later by Mead, Johnson & Co. For a considerable time the Council on Pharmacy and Chemistry had Caroid under consideration and in the end rejected the product on account of its variability. Although Caroid was found more active than other preparations of papain, examination showed that the claims for its digestive efficiency were exaggerated. Since the publication of the Council's report in 1914, Mead, Johnson & Co. do not seem to have made any propaganda for Caroid. It is now being promoted by the American Fermeut Co., but this firm has not requested a consideration of the product by the Council.—(*Jour. A. M. A.*, Nov. 4, 1922, p. 1629).

THE A. M. A. CHEMICAL LABORATORY.—When, some seventeen years ago, the Council on Pharmacy and Chemistry began its work of turning the light on proprietary medicines its main concern was to let physicians know the composition of many of the proprietary medicines widely advertised in medical journals. At that time the exposure of false or vague and meaningless declarations of identity was considered of basic importance. This fact is shown by the name of the Council and by the appointment at that time of many chemists and pharmacists as members of the Council. This need for work which should bring home to the medical profession the essential secrecy of the drug preparations which they were asked to prescribe lead also to the establishment of the A. M. A. Chemical Laboratory. The initial reports of the Council gave the medical profession the first definite statement of many proprietaries then advertised extensively. Though many of these proprietaries were offered to the profession as new chemical discoveries, they were, in fact, simple mixtures of well known chemicals and their analysis presented little difficulty. As the result of this work of the Council and the Laboratory most promoters of pharmaceutical specialties know better than to invest money in the exploitation of mixtures the sale of which would be interfered with when there is a disclosure of its composition. But this does not mean that today the composition of all proprietaries is correctly declared. Proprietaries are still to be found which sail under false colors as to their composition.

The work of the Chemical Laboratory, however, has become more difficult. Instead of analyses of mixtures, the Laboratory has to do with new compounds of novel composition which do not have the chemical composition or chemical constitution ascribed to them. A report of the Council on Pharmacy and Chemistry of Galyl is an example of the

more difficult work now required of the Laboratory. The Laboratory investigated the product and reached the conclusion that its administration amounted to the giving of arsphenamin (in the form of the sodium compound) with extraneous inorganic material, and thus obviated the need of comparative clinical trials of Galyl with arsphenamin.—(*Jour. A. M. A.*, Nov. 11, 1922, p. 1690).

BARIUM SULPHATE FOR ROENTGEN-RAY WORK.—A manufacturer of barium sulphate for Roentgen-ray work reported to the Council on Pharmacy and Chemistry that, though its product is free from objectionable impurities and equal to that of other brands on the market, it was confronted with the difficulty that its product, when tested by the standards of New and Nonofficial Remedies, appeared to contain acid-soluble barium salts. It urged that the phosphate test be omitted in that it showed a noticeable phosphate reaction when barium phosphate is totally absent but when a non-poisonous and unobjectionable phosphate (such as calcium phosphate) was present. The manufacturer submitted the tests which he employed, which also included a test for the fineness (fluffiness) of the product.

The A. M. A. Chemical Laboratory deemed the objection to the phosphate test well founded and the proposed revision of the test for soluble barium and the "fluffiness" test worthy of consideration. The laboratory submitted the suggested tests to the firms whose brands of barium sulphate stood accepted for New and Nonofficial Remedies and also to a group of users of barium sulphate. In general the manufacturers agreed to the proposed new tests. Many of the users of barium sulphate held, however, that extreme fineness was not essential. Several objected to the high price charged for some of the very finely divided products. In consideration of the available evidence, the Laboratory recommended to the Council that the "fluffiness" test be not adopted, that the phosphate test be omitted and recommended in its place a test which will require reasonable freedom from foreign salts along with tests which shall guarantee freedom from water and acid soluble barium salts and freedom from heavy metallic salts. The Council agreed to the recommendation of the Laboratory and directed that the recommended revision of the tests be adopted for New and Nonofficial Remedies, 1923.—(*Jour. A. M. A.*, Nov. 11, 1922, p. 1687).

GALYL.—In 1918 Geo. J. Wallau, Inc., acting as U. S. distributor for Galyl (manufactured by A. Naline, Garenne, France), requested the Council on Pharmacy and Chemistry to consider the product. At that time Galyl was stated to be a compound made up of two arsphenamin molecules linked by means of two phosphorus groups. The product was insoluble in water and for use had to be dissolved in sodium carbonate. It was claimed to be less toxic than arsphenamin, quicker of action on spirilla and of equal therapeutic value. Later the composition of Galyl was changed. The "new" Galyl was stated to be a sodium salt of the "old" Galyl. The A. M. A. Chemical Laboratory investigated the new Galyl and concluded that, if the compound has the composition claimed for it, it is easily decomposed; that when prepared for administration either it is partly decomposed into sodium phosphate and sodium arsphenamin or else the original product contains sodium arsphenamin and free phosphate. In either case, injection will probably amount to the administration of phospharsphenamin (if any is present), sodium arsphenamin, sodium phosphate, sodium sulphite and sugar. In December, 1921, the Laboratory report was sent to the agent and by him transmitted to the French manufacturer. No evidence was received to controvert the findings of the Laboratory that Galyl does not have the composition claimed for it. On the other hand, the findings have been supported by independent investigators. Accordingly

the Council declared Galyl inadmissible to New and Nonofficial Remedies because the evidence indicated that it does not have the composition claimed for it; because the therapeutic claims are unwarranted; and because its use under another name than sodium arsphenamine with deceptive claims for its composition is irrational and a detriment to rational therapy.—(*Jour. A. M. A.*, Nov. 11, p. 1706).

HABITUAL USE OF BARBITAL.—The constant use of even small doses of barbital (veronal) affects the central nervous system. Those taking the drug habitually become much debilitated and seem less able to stand moderate doses. Death has occurred from a 3 gm. dose in addicts. In Great Britain barbital (veronal) has been classified as a poison. Many cases of poisoning occur from its indiscriminate use by the laity.—(*Jour. A. M. A.*, Nov. 11, 1922, p. 1709).

"PATENT MEDICINE" SECRECY.—For years the medical profession has insisted that the real reason that nostrum makers keep the composition of their products secret is (1) for the glamour that such secrecy throws around them, and (2) the fact that so long as the public does not know what is in a preparation the advertiser's imagination is given freer play. The "Patent Medicine" makers, on the other hand, have maintained that their reason for keeping the composition of their products secret is that the formula is personal property and, if made known, the market would be flooded with imitations. Recently, however, *Standard Remedies*, the mouthpiece of the "patent medicine" interests, has admitted that the medical profession was right and the "patent medicine" makers wrong. It stated editorially: "It should be remembered that while a developed formula has a great value, it is the trade name, the advertising, the merchandising skill applied in connection with it that creates its valuable good will. Ten to one a thorough search through books of formulæ will reveal that your own is already known to the medical world. But no one can get the same benefit from it that you have gained unless they spend in merchandising it the same money that you have spent."—(*Jour. A. M. A.*, Nov. 11, 1922, p. 1692).

APROTEIN AND APROTINE NOT ADMITTED TO N. N. R.—Aprotein and Aprotine are casein preparations marketed as "the foremost tissue and body builders" by the John Norton Co., Columbus, Ohio. Aprotein (formerly designated Aprotein No. 2 Granulated Food Casein) is described in the advertising issued by the John Norton Co. (formerly the Diaprotein Co.) as a "scientifically, specially prepared granulated casein precipitated from fresh skimmed milk, concentrated to a high degree". The Council declared Aprotein inadmissible to New and Nonofficial Remedies because (1) its composition does not agree with a good dietetic casein and was not found to have the composition claimed for it, and (2) it is not only irrational but also a hindrance to therapeutics to market a well known substance like casein under a fanciful name. Aprotine, in the information sent the Council, is designated "a sodium calcium caseinate derivative" prepared by precipitating an acid calcium caseinate from skimmed milk by the addition of acid, washing the precipitate, mixing it with sodium bicarbonate and drying. A comparison of the analyses furnished the Council suggests that Aprotine and Aprotein are the same. The advertising claims suggest that Aprotine has therapeutic properties, whereas its effects will not differ from those of cottage cheese. The Council on Pharmacy and Chemistry declared Aprotine inadmissible to New and Nonofficial Remedies because (1) the statements made in regard to its composition are indefinite and misleading, (2) the therapeutic claims are unwarranted, and (3) there is no evidence to indicate that this casein preparation presents an improvement over casein-N. N. R.—(*Jour. A. M. A.*, Nov. 18, 1922, p. 1786).

THE PITUITARY HORMONE.—So far the active principle of the pituitary gland has not been isolated. It is possible that the pituitary contains more than one physiologically potent constituent. Perhaps both pressor and depressor compounds are derivable from the gland structures. Abel and Rhuiller have prepared products from the infundibulum which have both vasomotor and oxytocic effects. These investigators believe that if the product is obtained in the pure state, it will be fifty times more active than histamin, and that there is but a single specific hormone in the infundibulum, and that this has both vasomotor and uterus-stimulating properties as well as a powerful effect on the kidneys. The hope of a speedy isolation of this pituitary hormone as a chemical entity is somewhat shattered by the fact that it is unstable in laboratory manipulations.—(*Jour. A. M. A.*, Nov. 18, 1922, p. 1770).

ADAMS' WONDER CAPSULES.—In newspaper advertisements women and girls are urged to call at some local drug store and talk about their ailments with a kind, motherly woman of the experience and sympathetic understanding of Mrs. Gene Case. This noted "health advocate" recommends Adams' Wonder Capsules for girls and women who are "troubled with periodical pains", cramps and headache at menstrual time or who have neuritis, neuralgia, stomach, bowel or bladder pain * * *. The A. M. A. Chemical Laboratory examined Adams' Wonder Capsules and found that the capsules contained the recently introduced drug, benzyl succinate.—(*Jour. A. M. A.*, Nov. 25, 1922, p. 1876).

BI-OXO-DYN NOT ADMITTED TO N. N. R.—Bi-Oxo-Dyn is put out by "Bi-Oxo-Dyn", Savannah, Ga., according to the information furnished the Council on Pharmacy and Chemistry by W. F. Kennedy, Jr., who states that he is the maker and originator of the product. It is to be inferred that Bi-Oxo-Dyn contains 2 percent of free (elementary) iodin and 0.1 percent of hydrastin, 3 percent of chloral hydrate, 14 percent of bismuth hydroxide, 1 percent of menthol in a petrolatum base, and from 0.5 to 1.0 percent of a compound of succinyl peroxid and boric acid. However, the A. M. A. Chemical Laboratory reported that Bi-Oxo-Dyn contains no free iodin, but that it contains combined iodin in the form of iodid ions and that the presence of hydrogen peroxid or other peroxids could be demonstrated. The claim is made that Bi-Oxo-Dyn is of inestimable value for injection into the urethra and it is recommended in specific urethritis, uterine hemorrhage and painful chordee.

The Council declared Bi-Oxo-Dyn inadmissible to New and Nonofficial Remedies because (1) the statements of its composition are indefinite, misleading and incorrect, (2) the therapeutic claims are unwarranted, (3) the name is not descriptive of the composition of the product, and (4) Bi-Oxo-Dyn is a complex irrational mixture the marketing of which is detrimental alike to the interests of the public and of scientific medicine.—(*Jour. A. M. A.*, Nov. 25, 1922, p. 1867).

COMMERCIAL VITAMIN PREPARATIONS.—No student of the subject of vitamins can fail to recognize the ridiculousness of recent attempts to supply alleged vitamin-bearing preparations as cure-alls. It is doubtful if any latent, not to say evident, avitaminosis is prevalent in this country. Nevertheless, preparations sold to supply this alleged need of vitamins should at least not be fraudulent. E. P. Bailey of the Connecticut Experiment Station has determined the potency of some commercial vitamin preparations as compared with that of dried brewers' yeast. The report stated that apparently many manufacturers are not convinced of the efficiency of their vitamin preparations and, therefore, have added various medicaments of established reputation in therapeutics

for good measure and to ensure a reaction of some description. Bailey compared the potency of the products on the reasonable assumption that a preparation which in a 100 mg. dose does not exhibit the potency shown by 100 mg. of a good grade of dry brewers' yeast employed under comparable conditions does not justify a claim of superior therapeutic value as a source of water-soluble B vitamin. On this basis, nearly half of the advertised products failed. Others showed only inferior content of vitamin. A few of the products equaled good brewery yeast in potency and only two or three products among nearly two dozen examined showed any superiority of "concentration" over ordinary yeast.—(*Jour. A. M. A.*, Nov. 25, 1922, p. 1846).

THE "PROPAGANDA FOR REFORM" IN GERMANY.—An effort to establish a German Council on Pharmacy and Chemistry was made in Germany before the war. In spite of the demoralizing effects of the war, efforts are again being made in Germany toward the establishment of such a council. A commission of the Aerztevereinsbund, including such well-known men as Professor Heffter, Klempner, Lenhoff and Schwalbe, has issued an appeal directed particularly against the misleading or fraudulent advertising still so common in many medical journals.

To acquaint the German medical profession with the method of the A. M. A. Council on Pharmacy and Chemistry and the changes that have been brought about in the United States, the Deutsche Medizinische Wochenschrift of which Dr. Schwalbe is editor recently published a lengthy article that detailed the organization, aims and objects and accomplishments of the Council.—(*Jour. A. M. A.*, Nov. 25, 1922, p. 1848).

BOOK REVIEWS

RADIUM THERAPY. By Frank Edward Simpson, A.B., M.D., Professor of Dermatology, Chicago Polyclinic; Adjunct Clinical Professor of Dermatology, Northwestern University Medical School, etc. 166 original engravings; cloth, 392 pages. Price \$7.00. C. V. Mosby Company, publishers, St. Louis, 1922.

At present there is a widespread interest in radium therapy. It is possible that radium as a therapeutic agent has fallen into disrepute in some quarters as a direct result of the unjustifiable enthusiasm on the part of some physicians, as well as through the employment of radium by those who put forth neither the time nor the effort required to study the effects of radium, the proper mode of application, and its good as well as ill effects. That radium therapy has a field of usefulness in a variety of affections is unquestioned, and in certain pathological conditions the results brought about by radium therapy are almost miraculous. However, radium is impotent as well as dangerous except when used judiciously and with intelligence. Therefore, in view of the widespread interest in the subject, this book by an authority should be welcomed by the medical profession and ought to have a large sale. The essayist discusses radium from every angle, including origin and chemical nature, physical, chemical and biological effects of the rays, dosage, technic, and the therapeutic uses in general surgery, gynecology, dermatology, ophthalmology, otology, and laryngology, diseases of the ductless glands and in internal medicine. The book is made more interesting by case histories and a very large number of original illustrations. The injurious effects of radium also come in for intelligent discussion, and the book closes

with a very comprehensive bibliography. Throughout the entire work the author discusses the subject intelligently and temperately.

HYGIENE, DENTAL AND GENERAL. By Clair Elsmere Turner, Assistant Professor of Biology and Public Health in the Massachusetts Institute of Technology; Assistant Professor of Hygiene in the Tufts College Medical and Dental Schools. With chapters on Dental Hygiene and Oral Prophylaxis by William Rice, Dean, Tufts College Dental School. Cloth, pp. 400. Price \$4.00. C. V. Mosby Company, St. Louis, 1920.

Multum in parvo is an expression that may be applied most appropriately to this excellent little work on hygiene. Not only is the book of value to the dentist, but equally so to the doctor and indeed there is so much information on personal hygiene contained in it that even the layman would needs be intensely interested in it. A surprising amount of ground is covered and the information is of the most accurate and practical kind.

THE SYMPTOMATIC TREATMENT OF GONORRHEA IN THE MALE. By Norman Lumb, O.B.E. Late R.A.M.C. Specialist in Venereal Diseases, and Officer-in-Charge of Division, 39 and 51 General Hospitals. B.E.F.; Clinical Assistant, St. Peter's Hospital for Stone. Second Edition. Cloth, pp. 123. Price \$1.75. Lea & Febiger, Philadelphia, 1920.

The little volume offers a remarkably concise résumé of the subject of gonorrhea and its treatment from a modern standpoint. The newer methods of cultivation and the complement fixation test are featured as earlier diagnostic agencies and considerable enthusiasm is displayed by the author in the therapeutic use of vaccines, even in the very acute stage.

THE PRACTICAL MEDICINE SERIES. Volume 2 General Surgery. Edited by Albert J. Ochsner, M.D., F.R.M.S., L.L.D., F.A.C.S., Surgeon-in-Chief Augustana and St. Mary's of Nazareth Hospitals; Professor of Surgery Medical Department, University of Illinois, Series 1920, Chicago. The Year Book Publishers. Cloth, pp. 620. Price \$3.50.

Although there is an unpleasant abbreviation of words in this volume, the text throughout is comprehensive and interesting. While that part devoted to abdominal surgery is more extensive yet much that is worth while in goitre and other thoracic surgery is reviewed.

One cannot refrain from calling attention to the simple method of citrate transfusion by means of an Erlenmeyer flask, as devised by Farr and Gilroy.

All told the volume this year is very complete and satisfying.

SHORT TALKS ON PERSONAL AND COMMUNITY HEALTH. By Louis Lehrfeld, A.M.M.D., Agent for the Prevention of Disease, Department of Public Health, Philadelphia. With Introduction by Wilmer Krusen, M.D., L.L.D. Director Department Public Health and Charities, Philadelphia. Cloth, pp. 271. Price \$2.00. F. A. Davis Company, Philadelphia, 1920.

The problem of community health today is more than ever, one of prevention rather than cure of disease. Hence any agent that will aid in the education of the public along the lines of the prevention of disease will prove an asset to both laity and medical profession. This short, concise series of health talks should prove invaluable in spreading the gospel of disease-prevention and public health through schools, industrial plants, community meetings, social service agencies, churches or what not. Indeed it would be a most valuable addition to the library of any home, professional or otherwise.

MATERNITAS—A Book Concerning the Care of the Prospective Mother and Her Child. By Charles E. Paddock, M.D., Professor of Obstetrics, Chicago Post-Graduate Medical School; Assistant Professor of Obstetrics, Rush Medical College; Attending Obstetrician St. Luke's Hospital. Cloth, pp. 210. Price \$1.75. Published by Cloyd J. Head & Co., Chicago, Illinois.

A truly satisfying little work is here presented that should prove most useful to the prospective and new mothers. One of its chief charms is the rare good common sense offered in answer to many of the time-honored superstitions with which the expectant mother is burdened by over-solicitous friends. This third edition has been carefully revised and much new material, as well as drawings, added.

THE RADIOGRAPHY OF THE CHEST. Volume 1. Pulmonary Tuberculosis. With nine line diagrams and ninety-nine radiograms. By Walker Overend, M.A., M.D. (Oxon), B.Sc. (Lon.). Hon. Radiologist and Physician to the Electrotherapeutic Department, East Sussex Hospital (Hastings); Radiologist to the City of London Hospital for Disease of the Chest (during the War); etc. St. Louis: C. V. Mosby Company, 1920. Cloth, pp. 119. Price \$5.00.

At an age when conquest over tuberculosis has resolved itself largely into a question of early diagnosis that agent is most welcome which aids materially in the elucidation of the earliest positive findings. The time has come when no medical man desires to wait for the sputum to show tubercle bacilli before making a diagnosis for it is only the fortunate few whose lesions are sufficiently close to a bronchus as to discharge them in the sputum early in the disease. Nor is the indiscriminate use of tuberculin diagnostically to be encouraged for it is quite possible at times to produce untoward effects thereby.

If then we are able to correlate all the clinical data with carefully interpreted x-ray findings, realizing the pitfalls and possible shortcomings of each, we are then rendering our patient the most conservative service possible. For such purposes this work is admirably adapted, being illustrated as it is by a profusion of most instructive skiagrams. While all x-ray negatives lose materially in detail and diagnostic value in print reproduction yet sufficient remains to warrant the appearance of such a book as this one.

The author repeats what has been argued many times, viz., that the greatest accuracy in the diagnosis of pulmonary tuberculosis can only come by the combined study of the history, symptomatology, physical and laboratory findings and the x-ray data.

THE PROPAGANDA FOR REFORM IN PROPRIETARY MEDICINES, Vol. 2, 1922. Containing Reports of the Council on Pharmacy and Chemistry and Contributions from the A. M. A. Chemical Laboratory and from *The Journal of the American Medical Association*. Cloth. Price, \$2.00. Pp. 603 with illustrations. Chicago: American Medical Association, 1922.

The present book is the second volume of the "Propaganda for Reform in Proprietary Medicines." The first volume ran through nine editions. The ninth edition contained (1) the most important reports of the Council on Pharmacy and Chemistry, (2) the reports of the A. M. A. Chemical Laboratory, and (3) those articles from *The Journal of the American Medical Association* which deal with the problems of proprietaryship in medicine and the furtherance of rational drug therapy. All of this material covered a period prior to 1917.

The present (second) volume contains similar material covering the period from January, 1917, to April, 1922, inclusive.

The index in this new volume is, in effect, a bibliography, including references not only to articles in the book but also (a) to articles which appeared in Volume 1; (b) to articles on the same general subject in *The Journal of the American Medical Association*, and (c) to articles appearing in the annual reports of the Council on Pharmacy and Chemistry and of the A. M. A. Chemical Laboratory, but not printed in either volume of the Propaganda for Reform in Proprietary Medicines.

This book is not only valuable for the information it contains, but it is also interesting. It shows up the technique of the artist in the sale of proprietary medicines, tells of his skillful word-pictures that are sent to the physician as "literature". It makes clear the work of the Council on Pharmacy and Chemistry, the A. M. A. Chemical Laboratory and *The Journal of the American Medical Association* in their several capacities as servants to the medical profession and as champions of rational medicine. The book should be in every physician's library, and more than that, should be within reach for convenient reference.

1920 COLLECTED PAPERS OF THE MAYO CLINIC, Rochester, Minnesota. Octavo of 1392 pages, 446 illustrations. Philadelphia and London: W. B. Saunders Company. Cloth, \$12.00 net.

The annual volume of the Collected Papers of the Mayo Clinic is always awaited by the surgical profession with great interest. This volume, like the previous ones, appears under the editorship of Mrs. M. H. Mellish. It contains 118 individual papers by 60 contributors. A comprehensive work of this character cannot be systematically reviewed. Of course, there are certain papers which deserve special attention. C. H. Mayo's paper on Gastric and Duodenal Ulcers together with Carman's article on the Roentgen Diagnosis and Localization of Peptic Ulcer will be carefully read by everyone interested in the subject of gastric surgery. Pemberton's contribution to the Surgery of Substernal and Intrathoracic Goiters is very instructive. W. J. Mayo's paper on Mortality and End Results in Surgery will be read with attention and respect—he considers the results of the 10,280 operations which were performed in St. Mary's Hospital during 1919. Rosenow's Studies in Influenza and Pneumonia cover 145 pages. This work covers such a variety of subjects that it must appeal to the general medical profession. The Reviewer is willing to bestow the highest praise of which he is capable upon this volume.

DISEASES OF WOMEN. By Harry Sturgeon Crossen, M.D., F.A.C.S., Clinical Professor of Gynecology, Washington University Medical School, and Gynecologist in Chief to the Barnes Hospital and the Washington University Dispensary, etc. Fifth Edition. Revised and Enlarged. With nine hundred thirty-four engravings, including one color plate. Cloth, \$10.00. St. Louis: C. V. Mosby Company, 1922.

It is a great pleasure to have placed before us again a new edition of Dr. Crossen's Diseases of Women. This book deserves its position as one of the popular American text-books. The author has made an earnest effort to bring all subjects up to date. One notes this effort particularly in the discussion of the advances in x-ray and radium therapy in their relation to malignant disease and uterine myoma. Dr. Crossen's teaching in regard to the treatment of carcinoma of the cervix uteri is fundamentally sound. He states: "In early operable cases, that is, in those cases apparently confined to

the uterus, I feel that immediate removal of the uterus and adjacent tissues likely to be involved is the safest plan," and "In order to give the patient the best chance in these early cases it is advisable to employ both radium and operation." His views regarding the present status of the treatment of myomata are in agreement with those of most pelvic surgeons. A new subject, dealt with in this edition, is Endometrial Cysts of the Ovary—the author closely follows the excellent article by Sampson (*Arch. of Surg.*, Sept., 1921). The advances in endocrinology as it relates to gynecologic conditions has been noted by Dr. Hugo Ehrenfest, who wrote the chapter on this subject in the preceding edition. In the chapter on "Preparation for Abdominal Section" the reviewer notes with pleasure that Crossen has abandoned prolonged dieting and purging. It is interesting to read the following: "Formerly the author took particular pains thoroughly to saturate the patient with water before operation, for the purpose of aiding the kidney action after operation and diminishing the thirst, but he has discontinued the practice as a routine because he found certain drawbacks—the principal one being that it interfered with spontaneous urination after operation." The author is still among those who believe that every patient should have a bowel movement upon the third day after operation.

DISEASES OF THE THYROID GLAND. By Arthur E. Hertzler, M.D., F.A.C.S., Professor of Surgery in the University of Kansas School of Medicine; Surgeon to the Halstead Hospital, Halstead, Kansas; Surgeon to St. Luke's Hospital and St. Mary's Hospital, Kansas City, Mo., and to the Provident Hospital, Kansas City, Kansas. One hundred and six original illustrations. Cloth, \$5.00. St. Louis: C. V. Mosby Company, 1922.

This book of two hundred and forty-five pages will be of interest to the surgeon who is familiar with the surgery of the thyroid. It is a pure, surgical monograph and is not entitled to the comprehensive title of "Diseases of the Thyroid". It is not a safe book for the tyro in thyroid surgery as it is wholly an exposition of Hertzler's ideas—and his ideas are not always sound. There is much truth in the author's contention that the small country hospital drawing its patrons from the immediate community is best able to study end results. Granting this statement it is unfortunate that in this book "the presentation of statistics has been designedly avoided". We are able to learn nothing regarding the number of the author's cases, his permanent cures or his mortality. He devotes about one page to the subject of Basal Metabolism and in this connection states "a good laboratory man may be of much help to the inexperienced clinician but to the experienced surgeon the aid is relatively little". Men like Crile and Lahey will enjoy reading that so far as the anesthetic is concerned "but two, ether and novocaine, need be considered though a few surgeons employ nitrous-oxide-oxygen anesthesia". The book is splendidly printed and the illustrations by Tom Jones are, of course, excellent.

INJURY, RECOVERY AND DEATH IN RELATION TO CONDUCTIVITY AND PERMEABILITY. By W. J. Osterhaut. Cloth, \$2.50. Philadelphia and London: J. B. Lippincott & Company, 1922.

The author is professor of botany at Harvard University and the book is one of a series of Monographs on Experimental Biology. The author endeavors to treat certain aspects of biology according to the spirit and methods of the exact sciences. After an introduction takes up the problem of Methods of Measuring Electrical Conductivity, The Mechanism of the Process of Death, Injury and Recovery,

Antagonism, Anesthesia, Conductivity and Permeability and concludes with a bibliography. This book will be read by anyone interested in the subject of experimental biology.

A MANUAL OF PHARMACOLOGY AND ITS APPLICATIONS TO THERAPEUTICS AND TOXICOLOGY. By Torald Sollmann, M.D., Professor of Pharmacology and Materia Medica in the School of Medicine of Western Reserve University, Cleveland. Second edition, entirely reset. Octavo of 1066 pages. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, \$7.00 net.

This work by a distinguished author is in its second edition and represents all the late advances and developments of pharmacology up to the present time. The revision has required that the book be reset from cover to cover and in doing so some valuable new features have been incorporated. The arrangement is especially desirable in that two sizes of type have been used throughout, the larger type giving a connected and concise statement of the essentials of pharmacology; the smaller type containing more detailed data for consultation. The author also has considered the practical uses to which the book will be put and those drugs that are generally used are given extensive consideration. The new drugs and remedies are emphasized with definite instructions for their use. The section concerning prescription writing is simple, easily understood, and will fully equip the student for the correct writing of prescriptions. The tabulation of average doses classified with reference to their importance will prove a ready and valuable reference. This new volume is improved by the addition of much knowledge acquired during the late war. The war gases and the newer antiseptics are included in the discussion. An extensive bibliography will prove valuable to those who wish to investigate subject further.

ENDOCRINE GLANDS AND THE SYMPATHETIC SYSTEM. By P. Lereboullet, P. Harvier, H. Carrion and A. G. Guillame. Translated by F. Raoul Mason, M.D., Instructor in Pediatrics New York Post-Graduate Medical School and Hospital, with the collaboration of Daniel R. Ayres, A.B., M.D., Assistant Professor of Gynecology, New York Post-Graduate Medical School and Hospital. Cloth, 378 pages. J. B. Lippincott Company, Philadelphia.

This American edition represents a translation of the original French text. Consequently it is an expression of the French viewpoint of endocrinology, and perhaps French physicians more than any others have been deeply interested in the subject and done most to put endocrinology upon a rational basis. Therefore, American physicians will welcome this translation of a new textbook containing the latest views on the subject from the French standpoint.

As the translator well says, there is no subject in medicine at the present time which has aroused such a widespread interest as endocrinology. On the other hand there is no subject that is so little understood and in the practical application of which so many extravagant claims have been made by enthusiasts. In fact we are inclined to believe that our French confreres, the authors of this textbook, may be classed as enthusiasts, even though they have tried to avoid extravagance in statement. That there are numerous disturbances of internal secretion giving rise to troublesome symptoms and pathological conditions we all will admit, and while it is entirely possible that many of these conditions are now amenable to treatment with glandular extracts, it remains to be proven to unbiased minds that glandular extracts are applicable in such a wide field of therapeutic use as indicated by the claims put forth by certain endocrinologists and in a measure sustained by even the authors of the textbook under

(Continued on Adv. page xx)

INDEX TO VOLUME XV

ORIGINAL ARTICLES	PAGE	PAGE
A		
Abortion or Delivery, Septic Infection Following	293	
Advertise, Shall We?	235	
ALLEN, H. R., Indianapolis (The Correction of Club Feet)	289	
Anesthesia, Local, as a Supplement to General Narcosis	259	
Appendicitis, Report of Cases	303	
B		
BAKER, W. H., South Bend (Hypertrophic Ileocecal Tuberculosis)	271	
BEALL, CHARLES G., Fort Wayne (Functional Diseases of the Nervous System in Soldiers and Civilians)	75	
Bile Ducts. Operative Injury of the Hepatic and Common	192	
Biliary Infections	109	
Biliary Tract Infection and Its Differentiation from Ulcer	373	
BUTLER, C. C., Newcastle (The Neurological Phase of Endocrinology)	414	
BONN, H. K., Indianapolis (Operative Injury of the Hepatic and Common Bile Ducts)	192	
BOSENBURY, CHARLES S., South Bend (State Medicine)	117	
BOYD-SNEE, HARRY, South Bend (Streptococcal Osteomyelitis of the Temporal Bone)	147	
Brain, Concussion of the, and Fracture of the Skull	264	
C		
Caesarian Section, A Case of Eclampsia with 42 Convulsions, Treated by	13	
Carcinoma of the Uterine Cervix. Treatment of	339	
Cardiology, Present Day Clinical	39	
CHILDS, A. W., Madison (Constructive Thinking in Our Medical Organizations)	350	
CLARK, STANLEY A., South Bend (The Treatment of Carcinoma of the Uterine Cervix)	339	
Club Feet, The Correction of	289	
D		
DAVIDSON, W. R., Evansville (Status of the Indiana Medical Profession)	337	
DEWEY, E. L., Whiting (A New Histology of Red Blood Corpuscles and Staining Technic)	305	
Duodenal Tube, Diagnostic Uses of the	114	
E		
Eclampsia, A Case of, with 42 Convulsions, Treated by Caesarian Section	13	
Encephalitis, Epidemic	47	
Encephalitis, Epidemic, After Effects	381	
Endocrinology in Its Medical Aspects	409	
Endocrinology, Neurological Phase of	414	
Endocrinology, Surgical Aspects of	423	
F		
FANKBONER, W. A., Marion (Epidemic Encephalitis) (Epidemic Encephalitis After Effects)	49	
Female, Sterility in the	224	
Focal Infection, Bacteria Recovered Postmortem with Special Reference to Selective Localization and	1	
Foreign Bodies Within the Respiratory Tract	78	
Fractures, Compound, Treatment of	255	
FRAZIER, CHARLES H., Philadelphia (The Trend of Neurological Surgery)	405	
G		
GARE, W. E., Indianapolis (Some Aspects of Recent Surgical Progress)	229	
GATCH, W. D., Indianapolis (A Case of Eclampsia with 42 Convulsions, Treated by Caesarian Section) (The Clinical History of Tumors of the Face and Jaws as a Guide to Their Correct Diagnosis and Proper Treatment)	13	
H		
HADLEY, M. N., Indianapolis (Local Anesthesia as a Supplement to General Narcosis)	259	
HERMANN, GEORGE R., Ann Arbor (Present Day Clinical Cardiology)	39	
Histology, A New, of Red Blood Corpuscles and Staining Technic	305	
HOFFMAN, R. V., South Bend (Some Problems in Syphilis)	152	
HOLLIS, W. A., Hartford City (Some Professional Shortcomings)	54	
HOWARD, C. NORMAN, Warsaw (A Case of Bezold's Mastoiditis)	232	
HURTY, JOHN N., Indianapolis (An Old Indiana Book on Medicine)	122	
I		
Indiana Medical Profession, Status of the	337	
Infection, Biliary Tract, and Its Differentiation from Ulcer	373	
Infection, Focal, Bacteria Recovered Postmortem with Special Reference to Selective Localization and	1	
Infection, Septic, Following Abortion or Delivery	293	
Infections, Biliary	109	
Infections of the Kidney, Non-Tuberculous	298	
J		
JACKSON, FREDERICK E., Indianapolis (A Medical Sermon)	163	
JACKSON, G. B., Indianapolis (Sterility in the Female)	224	
JAEGER, A. S., Indianapolis (Septic Infection Following Abortion or Delivery)	293	
Jaundice, Epidemic	430	
K		
KEARBY, D. O., Indianapolis (What the General Practitioner Can Do in Otology)	155	
KEIPER, GEORGE F., Lafayette (Sand Bur in the Larynx)	161	
KENNEDY, W. U., Newcastle (Abdominal Trauma)	221	
KETCHAM, JANE, Indianapolis (Puerperal Eclampsia)	187	
Kidney, Non-Tuberculous Infections of the	298	
KREBS, MAURICE, Huntington (Foreign Bodies Within the Respiratory Tract)	78	
L		
Larynx, Sand Bur in the	161	
LITTLE, W. D., Indianapolis (A Case of Eclampsia with 42 Convulsions, Treated by Caesarian Section)	13	
Ludwig's Angina	196	
LUZADDER, J. E., Bloomington (The Therapy of Syphilis)	385	
LYON, M. W., JR., South Bend (Hypertrophic Ileocecal Tuberculosis)	271	
M		
Mastoiditis, A Case of Bezold's	232	
MCCASKEY, G. W., Fort Wayne (Diagnostic Uses of the Duodenal Tube) (Endocrinology in Its Medical Aspects)	114	
McCOWN, P. E., Indianapolis (Non-Tuberculous Infections of the Kidney)	409	
Medical Aspects of Endocrinology	409	
Medical Organizations, Constructive Thinking in Our	350	
Medical Sermon, A	163	
Medicine, An Old Indiana Book on	122	
Metabolism, Disturbances of Carbohydrate	343	

	PAGE		PAGE
MIX, CHARLES L., Chicago (Biliary Tract Infection and Its Differentiation from Ulcer).....	373		
MOLT, WILLIAM F., Indianapolis (Ludwig's Angina)	196		
MOON, VIRGIL H., Indianapolis (Ostitis Fibrosa Cystica)	185		
MUMFORD, E. B., Indianapolis (Treatment of Compound Fractures)	255		
	N		
Narcosis, General, Local Anesthesia as a Supplement to.....	259		
Nervous System, Functional Diseases of, in Soldiers and Civilians.....	75		
Neurological Phase of Endocrinology, The.....	414		
Neurological Surgery, Trend of.....	405		
	O		
Osteomyelitis, Streptococcic, of the Temporal Bone	147		
Ostitis Fibrosa Cystica.....	185		
Otology, What the General Practitioner Can Do In.....	155		
	P		
PFRAFF, O. G., Indianapolis (Congenital Pyloric Stenosis)	378		
Physician, The:			
Some Newer Tendencies in Preventive Medicine	15		
Mysticism and Symbolism in Relation to the History of Medicine.....	57		
Duty Toward the Psychological Development of Childhood and Youth in the Home.....	90		
How May He Grow Old Gracefully?.....	124		
Postmortem Recovered Bacteria, with Special Reference to Selective Localization and Focal Infection	1		
Professional Shortcomings, Some.....	54		
Puerperal Eclampsia.....	187		
Pyloric Stenosis, Congenital.....	378		
	R		
Respiratory Tract, Foreign Bodies Within the..	78		
REYNARD, E. G., Union City (Shall We Advertise?)	235		
	S		
School Children, Physical Inequality in.....	200		
Skull, Fracture of, and Concussion of the Brain	264		
SLUSS, JOHN W., Indianapolis (Biliary Infections)	109		
SOLOMON, LEON L., Louisville, Kentucky (Group Medicine Diagnosis).....	85		
SPOHN, G. W., Elkhart (Physical Inequality in School Children).....	200		
Staining Technic, A New Histology of Red Blood Corpuscles and.....	305		
State Medicine.....	117		
Sterility in the Female.....	224		
Streptococcic Osteomyelitis of the Temporal Bone	147		
STUCKY, J. A., Lexington, Kentucky (Trachoma or Folliculosis Among School Children)	7		
Surgery, Neurological, Trend of.....	405		
Surgical Aspects of Endocrinology.....	423		
Surgical Progress, Recent, Some Aspects of.....	229		
Syphilis, Some Problems in.....	152		
Syphilis, The Therapy of.....	385		
	T		
Trachoma or Folliculosis Among School Children	7		
Trauma, Abdominal.....	221		
Tuberculosis, Hypertrophic Ileocecal.....	271		
Tumors of the Face and Jaws, The Clinical History of, as a Guide to Their Correct Diagnosis and Proper Treatment.....	251		
	U		
Ulcer, Biliary Tract Infection and Its Differentiation From.....	373		
Uterine Cervix, The Treatment of Carcinoma of the	339		
	W		
WARVEL, J. H., Indianapolis (Disturbances of Carbohydrate Metabolism).....	343		
WATER, S. C., Middletown (Epidemic Jaundice)	430		
WELBORN, JAMES Y., Evansville (Report of Appendicitis Cases).....	303		
WHITEHEAD, R. E., Indianapolis (Concussion of the Brain and Fracture of the Skull).....	264		
WYNN, FRANK B., Indianapolis (The Physician: Some Newer Tendencies in Preventive Medicine)	15		
The Physician: Mysticism and Symbolism in Relation to the History of Medicine.....	57		
The Physician: Duty Toward the Psychological Development of Childhood and Youth in the Home.....	90		
The Physician: How May He Grow Old Gracefully?	124		
	EDITORIALS		
Advertising, Unethical.....	329		
Advertising, Unethical Medical.....	18		
Advertising, Unethical Newspaper.....	242		
American Medical Association, The St. Louis Meeting of the.....	98		
American Medical Association, The St. Louis Session of the.....	206		
American Physicians in Vienna, Discrimination Against	171		
Anesthetic, A New Synthetic Local.....	62		
California, Poor.....	436		
Cancer Week.....	353		
Cardiorenal Disease, Surgery In.....	353		
Chest, Normal, X-Ray and Clinical Findings in.....	205		
Church, The, Prostituted in the Interests of Quackery	241		
Committees, Useless.....	331		
Council on Pharmacy and Chemistry, Support the	278		
Diphtheria, Prevention Against.....	169		
Fees, Division of.....	207		
Figures Never Lie—But Figurers Do	97		
Gorgas, Memorial, The.....	332		
Growing Old Gracefully	96		
Hay Fever.....	277		
Holiday Message, Our.....	435		
Hospital Day, National.....	131		
Hurley, Dr., the Retirement of	330		
Influenza Epidemic, Another.....	62		
Indiana University School of Medicine Summer Courses	170		
Investor, The Small.....	355		
Law, Anti-Corset. And Now They Seek an.....	355		
"Le Caducee"	278		
Lorenz, Lessons from	173		
Lorenz, Wedl & Company, Detroit, Appearance of	172		
Mayo Clinic, The Conduct and Policy of the....	331		
Medical Innovations, Promiscuous Adoption of ..	19		
Medicinal Preparations, Exaggerated Claims for	435		
Medicine, Paternalistic	130		
Medical Progress and Public Health, the Jekyll-Hyde Attitude of the Public Press Concerning	239		
Politics, Medical.....	131		
President, Our.....	329		
Protein Therapy	132		
"Public, Fair Play to the"	132		
Public Health, The Jekyll-Hyde Attitude of the Public Press Concerning Medical Progress and	239		
Public Health Work Aided by Fish	353		
Quackery, Prostituting the Church in the Interests of	241		
Salesmanship, Camouflaged	63		
Socialistic Medicine, A. M. A. to Combat	354		
Socialistic Tendencies in Medicine	355		
Socialized Medicine	18		
Tax, Income, Returns for 1921	64		
"Underweight" a Delusion	240		

	PAGE		PAGE		
Vaccines in Whooping Cough.....	130	P			
Vitamines, Use and Abuse of.....	205	Palmer, Robert F.	401		
Whooping Cough, Vaccines in.....	130	Parr, William L.	400		
Wynn, The Death of Dr.	277	Petro, R. B.	26		
DEATHS					
A					
Allen, Irvin O.	212	Preston, Joseph L.	442		
Arnold, J. W.	26	Prough, W. C.	26		
B					
Banks, William H.	103	Purdy, Joseph C.	359		
Benham, John F.	212	R			
Bennett, Stephen M.	359	Randolph, Frank.	401		
Birchfield, J. W.	212	Records, John N.	442		
Black, John P.	137	Ritter, T. B.	441		
Boyd, Charles L.	68	S			
Brackney, Millard F.	178	Shane, Thomas A.	178		
Brigham, Edwin B.	68	Smethers, Charles M.	245		
Brown, Eli.	212	Stevenson, George A.	178		
Brown, E. L.	245	Stone, Augusta....	359		
Bull, John H.	360	T			
Bunch, Frederick L.	68	Tidrick, Reuben R.	401		
Butler, William H.	441	Toner, Harry S.	26		
C					
Calvin, Warren D.	442	Tracy, Stephen P.	137		
Carter, David R.	359	Tresidder, J. T.	360		
Christie, James H.	213	U			
Clark, D. D.	212	Umberhine, Charles D.	212		
Coffin, Oliver S.	359	V			
Conger, Charles W.	137	Voris, Samuel F.	103		
D					
Didlake, M. P.	213	W			
F					
Fitch, Emma J.	137	Walker, Edwin F.	178		
Fleming, George W.	212	Washburn, Elihu P.	178		
G					
Garrett, Frank W.	283	Webster, James G.	359		
Givens, Charles C.	103	Wells, William Y.	441		
Gordon, Charles W.	26	Wheeler, Malinda M.	245		
Gray, Oliver F.	103	White, Samuel R.	26		
Greene, Henry E.	401	Williamson, W. N.	103		
H					
Hall, Stella A.	283	Wilson, Cyrus L.	68		
Harold, David H.	26	Woollen, Greenly V.	26		
Hart, Milo F.	137	Wynn, Frank B.	283		
Hatfield, Samuel D.	246	CORRESPONDENCE			
Hess, Frank C.	441	Advertising, The Mayo Clinic and Newspaper	336, Adv. p. xx		
Hollingsworth, John S.	178	Commendation	336, Adv. p. xx		
Hoover, E. M.	360	Inconsistency?	336, Adv. p. xx		
J					
Jessup, Maria	212	Insurance Companies, Doctors Imposed Upon By Mayo Clinic, The, and Newspaper Advertising	142, 336, Adv. p. xx		
Jones, Henry W.	103	Narcotic Order Forms, Stolen or Lost.....	288		
K		Recreation, The Doctor's Rest and.....	217		
Kennedy, Samuel A.	103	SOCIETY PROCEEDINGS			
Kimberlin, Albert Carl.....	26	Benton County.....	34		
Kochenour, William P.	103	Council, The.....	73		
Krebs, Maurice H.	335	Councilor District:			
L		Eleventh	141, 182		
Lenney, Joseph B.	401	Ninth	216		
Lord, J. Levi.....	400	Thirteenth	370		
Loring, Samuel C.	68	Councilors' Membership Contest.....	30, 73, 106, 141, 182, 216, 249, 287, Adv. p. xx, 361, 403, 444		
M		Decatur County.....	32		
Malsbury, Laughlin O.	283	Fort Wayne Medical Society.....	30		
Marshall, Robert E.	442	Grant County.....	33		
Marvel, Charles.....	137	Hamilton County.....	33, 288		
May, Albert.....	442	Indianapolis Medical Society.....	30, 182		
McClure, Charles A.	26	Indianapolis, Public Health Institute.....	32		
Meyer, J. H. Warren.....	68	Indiana State Medical Association.....	287, 361		
Milligan, C. E.	213	Indiana State Medical Association—Secretary's Report	73		
Morgan, Elmer E.	137	Indiana State Medical Association—Treasurer's Report	73		
N					
Newcomer, Martin V. B.	246	Jackson, Bartholomew and Jennings Counties..	182		
Newton, John T.	68	Jasper-Newton	33		
		Knox County.....	33, 249		
		Kosciusko County.....	403		
		Montgomery County.....	33		
		Muncie Academy of Medicine.....	33, 141, 444		
		St. Joseph County.....	35		
		Tippecanoe County.....	34, 141, 216		

BOOK REVIEWS	PAGE	PAGE
Abdominal Pain (Ortner) (Translation by Brams and Luger).....	220	
Arteriosclerosis and Hypertension with Chapters on Blood Pressure (Warfield).....	74, Adv. p. xx	
Blind, The; Their Condition and the Work Be- ing Done for Them in the United States (Best)	146, Adv. p. xx	
Chest, the Radiography of (Overend).....	449	
Consumption, Lessons on Tuberculosis and (At- kinson)	146, Adv. p. xx	
Dermatology, Ultra Violet Rays in Modern (Bernstein)	146, Adv. p. xx	
Endocrine Glands and the Sympathetic System (Lereboullet, Harvier, Carrion and Guillame) (Translation by Mason).....	450	
Epidemiology and Public Health (Victor C. Vaughan, Henry S. Vaughan, George T. Palmer)	219	
Episcopal Hospital, Medical and Surgical Re- ports of the, Philadelphia.....	220	
Gonorrhea in the Male, the Symptomatic Treat- ment of (Lumb).....	448	
Health Problems, Vice and Solutions (Funk).....	74, Adv. p. xx	
Health, Short Talks on Personal and Community (Lehrfield)	448	
Heredity, Human (Redfield).....	220	
Hygiene, Dental and General (Clair Elsmere Turner)	448	
Hypertension, Arteriosclerosis and with Chap- ters on Blood Pressure (Warfield).....	74, Adv. p. xx	
Injury, Recovery and Death in Relation to Con- ductivity and Permeability (Osterhaut).....	450	
Jesus, The Psychic Health of (Bundy).....	219	
Maternitas; A Book Concerning Care of Pro- spective Mother and Child (Paddock).....	449	
Mayo Clinic, 1920, Collected Papers of the, Roch- ester, Minnesota.....	449	
Mayo Foundation, Papers from the, for Medical Education and Research and the Graduate School of Medicine of the University of Minne- sota, covering the period 1915-1920.....	220, xx	
McDowell, Ephraim, "Father of Ovariotomy" and Founder of Abdominal Surgery with an appendix on Jane Todd Crawford (Schachner)	74, Adv. p. xx	
Medical Formulary, The New Pocket (Fitch)	146, Adv. p. xx	
Medicine, History of (Garrison).....	38	
Medicine, Optimistic (A Former Insurance Man)	146, Adv. p. xx	
Nasal Septum. Submucons Resection of the (Dunning)	146	
Neoplastic Diseases; A Treatise on Tumors (Ewing)	220	
Nostrums and Quackery (American Medical Association)	38	
Nurse, the Ophthalmic (Lewis).....	146, Adv. p. xx	
Ophthalmic Lens, Radiant Energy and the (Booth)	146	
Pathology, General—An Introdnction to the Study of Medicine. Being a Discussion of the Development and Nature of Processes of Disease (Oertel).....	108, Adv. p. xx	
Practical Medicine Series. Vol. II, General Srn- gery (Ochsner).....	220	
Practical Medicine Series. Vol. III (Eye, Ear, Nose and Throat) (Wood, Andrews and Sham- baugh)	38	
Propaganda for Reform in Proprietary Medi- cines, The.....		
Pharmacology, A Manual of, and Its Application to Therapeutics and Toxicology (Sollman)....	450	
Psychiatry, Practical Psychology and (Bnrr) .38, xxii		
Psychology. Practical, and Psychiatry (Burr) .38, xxii		
Quackery. Nostrums and (American Medical Association)	38	
Radiography in the Examination of the Liver. Gall-bladder and Bile Ducts (Knox).....	220	
Radium Therapy (Simpson).....	448	
Skin, Diseases of the (Ormsby).....	146, Adv. p. xx	
Skin, Diseases of the (Ormsby).....	146, Adv. p. 20	
Skin. Diseases of the (Sutton).....	146, Adv. p. xx	
Spleen, the, and Some of Its Diseases (Sir Ber- keley Moynihan).....	219	
Submucous Resection of the Nasal Septum (Dunning)	146	
Surgical Clinics of North America.....	220	
Surgical Subjects, Essays on (Moynihan).....	74, Adv. p. xx	
Thyroid Gland, Diseases of the (Hertzler)....	450	
Tuberculosis and How to Combat It (Pottenger)	38, xxii	
Tuberculosis and Consumption, Lessons on (Atkinson)	146, Adv. p. xx	
Ultra Violet Rays in Modern Dermatology (Bernstein)	146, Adv. p. xx	
Women, Diseases of (Crossen).....	449	

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consideration. In the main the authors have been conservative, and are frank enough to state that certain recent facts have been omitted as not having as yet been sufficiently controlled by unprejudiced observers. The book will be read with profit and interest and the professional standing of the authors justifies a careful consideration of the subject as presented. The book probably represents the latest word in endocrinology from those whose opinions deserve some consideration. The chapters on the pathology of the sympathetic system are excellent and form a valuable addition to the work.

DISEASES OF THE SKIN. By Henry H. Hazen, A.B., M.D., Professor of Dermatology in the Medical Department of Georgetown University and Professor of Dermatology in the Medical Department of Howard University. Formerly assistant in Dermatology in the Johns-Hopkins University. Second edition. Cloth, 625 pages, \$7.50. C. V. Mosby Company, St. Louis, 1922.

In preparing this second edition the author has rewritten the entire book with a view to bringing it entirely up to date as well as with a view to emphasizing certain features of most importance from a practical standpoint, as for instance, the pathology and treatment of syphilis, and x-ray and radium treatment of various diseases. The section upon eczema has been given special consideration in view of the changing ideas concerning the disease. A number of diseases not mentioned in the first edition have been included, and these are disturbances due to the vegetative nervous system, nevus and anemicus, and retention cyst of the lip. The author has succeeded in an endeavor to get away from the voluminous books which are not practical for either students or general practitioner. Very properly the author has emphasized the commoner skin diseases and their treatment. The illustrations, of which there are nearly three hundred, serve admirably in elucidating the text. The reader will appreciate the systematic way in which all of the subjects have been handled and the terse descriptions cover-

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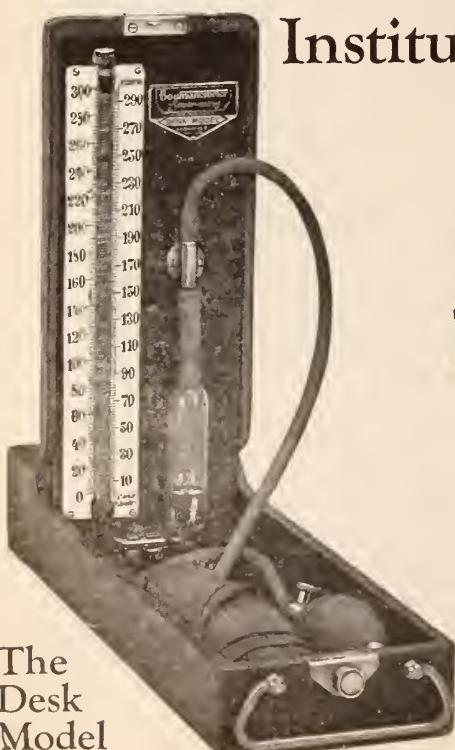


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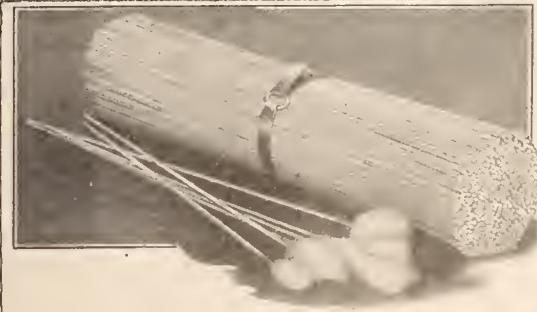
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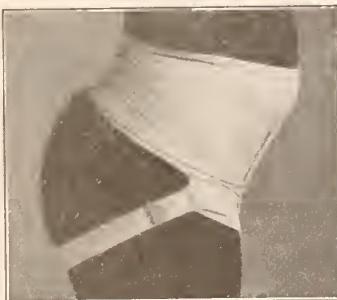
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